

THE CHEMIST & DRUGGIST

WINTER ISSUE
JANUARY 27, 1912

A Weekly Journal of Pharmacy and the Drug and Chemical Trades.
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CULTIVATING EXPORT TRADE.

The man who can help the manufacturer or proprietor of a speciality in this country better than any other to secure and to retain foreign business is the Merchant Shipper. He is the connecting-link, in the great majority of cases, between the buyer abroad and the seller at home. It is, therefore, important to secure the co-operation of merchant shippers, and for that purpose

THE EXPORT MERCHANT SHIPPERS' ISSUE

OF

THE CHEMIST AND DRUGGIST

has been designed. It will have a special circulation among shippers and exporters throughout the United Kingdom, and the Publisher is booking advertising-space for manufacturing firms in that particular issue. It will be published on March 9, and full particulars may be obtained by communicating with the Publisher, THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

Summary.

The more notable items only are dealt with.

Another quinine factory in Java is proposed (p. 121).
The use of arms in trade is the subject of an editorial article on p. 125.
Mr. G. Claridge Druce continues his account of the flora of the Azores on p. 135.
Descriptions of the brush and optical factories of Messrs. S. Maw, Son & Sons begin on p. 145.
Mr. S. J. Capper, formerly of the well-known Lancashire firm of chemists, died this week (p. 116).
One hundred years ago prescriptions were very different from what they are to-day. (See the article on p. 162.)
Sir James Dewar's experiments on low temperatures have been carried further, with interesting results (p. 132).
A Japanese pharmacist who recently visited England communicates his impressions of British pharmacy (p. 131).
A novel, and in some respects original, pharmacy in Piccadilly, London, is described, with photographs, on p. 142.
Oil of copaiba, however isolated from the oleo-resin, is always the same. So Mr. T. T. Cocking shows in a paper on p. 128.
The art of combining medicines in chocolate-creams is fully described, with formulæ, in the article on cremules (p. 137).
In "Drugs and Soap" we illustrate and describe the new administration offices of Messrs. Wright, Layman & Umney (p. 152).
News received after Wednesday evening, the report of the drug-auctions in London, and other matters, are inserted in the Coloured Supplement.
The Edinburgh programme for this year's meeting of the British Pharmaceutical Conference is outlined in a report of the Executive (p. 130).

The home section of the *C. & D. Diary* competition, as it concerns favourite advertisements and advertisers, is reported on, and ten prizes are awarded (p. 170).

British dispensers of German prescriptions will find comparison tables of the German and British Pharmacopœias useful. They are printed on pp. 154-156.

Messrs. Potter & Clarke, Ltd., are this year celebrating the centenary of the establishment of their business by Mr. Henry Potter, leech, herb and seed merchant. Historical notes and a description of the present-day business begin on p. 157.

The hearing of the Capsuloids case by Mr. Muir MacKenzie is proceeding, but the cross-examination of Dr. Dixon has been interrupted by his loss of voice. We report his evidence and that of Mr. E. J. Parry, Mr. John Murison, and others (p. 112 *et seq.*).

A full summary of the contents of the Winter Issue cannot be put in this column. The issue is designed to help all engaged in pharmacy and its allied branches to do better business by application of the ideas, suggestions, and other information contained in these pithy and well-illustrated pages.

CORNER FOR STUDENTS.

Conducted by Leonard Dobbin, Ph.D.

All communications for this section should be addressed thus: "Corner for Students, 'The Chemist and Druggist,' 42 Cannon Street, London, E.C."

QUALITATIVE ANALYSIS.

A MIXTURE of not more than three salts will form the subject of the next exercise in qualitative analysis. The mixture will comprise acids and inorganic bases occurring in the British Pharmacopœia, and is to be submitted to a thorough systematic examination, all its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a stamped and addressed envelope, not a stamp merely) will be received up to Tuesday, January 30, and the samples will be posted on the following day.

Students' reports will be received up to Saturday, February 10. Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

The analysis announced above forms the fourth exercise in the analytical tournament for the current winter session. The usual monthly first and second prizes in this series of analyses will be awarded only to apprentices or assistants who are preparing for the Qualifying examination of the Pharmaceutical Society of Great Britain or of Ireland, which fact must be attested on their reports. Students who adopt a *nom de plume* must adhere to it throughout the tournament.

Report on January Analytical Exercise.

The powder distributed to students on January 3 contained 2 parts by weight of lead carbonate, 1 part of bismuth oxy-nitrate, and 2 parts of di-ammonium hydrogen phosphate. The calculated composition of such a mixture is:

Pb	...	...	...	...	31.0
Bi	...	...	...	...	14.6
NH ₄	...	...	...	...	10.9
CO ₃	...	...	...	...	9.0
NO ₃	...	...	...	...	4.3
PO ₄	...	...	...	...	28.8
O	...	...	...	...	1.1
H	...	...	...	...	0.3
					100.0

Samples of the powder were distributed to fifty-eight students, and thirty-two reports were submitted for examination. The failures in the detection of the several constituents of the powder were: (a) Metallic radicals: lead, 4; bismuth, 7; ammonium, 1. (b) Acid radicals: carbonic, 10; nitric, 20; phosphoric, 3. Nine correspondents failed to observe the evolution of water which, although not present as water of crystallisation, was produced abundantly by the decomposition of the ammonium phosphate when the powder was heated in a dry test-tube.

This exercise, which has not proved to be a simple one in the hands of most of our correspondents, provided items of interest in connection with several points in its behaviour. Little trouble was met with in getting the powder dissolved, since complete solution took place when it was heated with moderately concentrated hydrochloric acid; but one or two students appear to have noted that a portion disappeared with some difficulty. This portion consisted of bismuth phosphate which was formed by interaction of the ammonium phosphate with the bismuth nitrate, and which is a salt less easily dissolved by dilute acids than most phosphates are. In the hands of some the hydrochloric acid solution gave a deposit of lead chloride on cooling, while others did not note this. In any case, hydrogen sulphide was passed through acid solutions, which in many instances contained too great a concentration of hydrochloric acid for anything like com-

plete precipitation of lead and bismuth as sulphides to be effected—both lead and bismuth sulphides being quite sensibly soluble in cold dilute hydrochloric acid and much more freely soluble in the more concentrated acid, especially if hot. As a result, both lead and bismuth passed to some extent into the filtrate and caused various difficulties further on in the analysis. The chief feature of these difficulties was the frequently observed formation of a precipitate, in considerable quantity, when ammonium chloride and ammonia were added as group reagents, the presence of the phosphoric-acid radical having been ascertained meanwhile. This precipitate consisted of bismuth phosphate, but as it was white and made its appearance at the stage at which aluminium phosphate would ordinarily be precipitated, it was very commonly mistaken for the latter substance. A few students recognised that its reactions did not agree with those of aluminium phosphate; but, while they concluded that aluminium was not present, they failed to reach any conclusion as to what the precipitate really consisted of. In several cases other effects of the failure to eliminate completely the lead and bismuth at the proper place were observed later on, some students getting precipitates of lead and bismuth chromates when testing for barium by means of potassium chromate, and others mistaking precipitates of lead and bismuth phosphates for calcium or ammonium magnesium phosphate. While the ordinary remedy for preventing lead and bismuth from passing into the filtrate would appear from the foregoing to lie in the sufficient dilution with water of the acid solution through which hydrogen sulphide is to be passed, it is probable that insufficient treatment with hydrogen sulphide also frequently causes trouble even with well-diluted solutions. It is not enough to pass hydrogen sulphide through a solution more or less casually and to assume because an abundant precipitate has been obtained that the precipitation is finished; steps must be taken to ensure not only that the solution is suitably diluted with water prior to or during the precipitation, but also that it is thoroughly saturated with the gas before the passing of the latter is finally discontinued. When these precautions were strictly attended to in the present analysis the filtrate from the lead and bismuth sulphides, after it had been freed from the excess of hydrogen sulphide by prolonged boiling, did not yield any precipitate either on adding ammonium chloride and excess of ammonia or on subsequently adding the other usual group reagents.

A number of students who tested the hydrogen-sulphide filtrate for the phosphoric-acid radical and found it present, proceeded at once to carry out the acetate separation without having ascertained whether or not ammonium chloride and excess of ammonia gave any precipitate. This was altogether unnecessary since, at this stage, the filtrate (assuming that the lead and bismuth had been properly removed) contained ammonium salts only and the complication which the phosphoric-acid radical introduces in the presence of barium-group metals and magnesium did not arise. Those students who got a precipitate (of bismuth phosphate) on adding ammonium chloride and ammonia, and found that it contained a phosphate, were misled at this point into carrying out the acetate separation to no useful purpose. We mention this here in order still further to emphasise the far-reaching nature of the confusion that may arise through the incomplete removal of the metals precipitable by hydrogen sulphide.

The failures to detect the nitric and carbonic-acid radicals were unusually numerous. These failures in the case of the former were due, in many instances, simply to omission to test for it, but in the case of the latter, the cause was the overlooking of the evolution of carbon dioxide on treating the powder with an acid, the effervescence, although distinct, being somewhat inconspicuous.

It seems worthy of special mention that one up-to-date correspondent read the note on a formaldehyde test for bismuth, which was printed in the *C. & D.* for January 13 (index folio 48), applied the test in the present analysis, and incorporated the result in his report, which reached the conductor of this column, *via* the Editor, on the morning of January 16! We anticipate that this student will take a higher place in our lists, by and by, if he perseveres and continues to compete.

PRIZES.

The first prize for the best analysis has been awarded to
R. STOKES, c/o Boots, Ltd., Melton Mowbray.

The second prize has been awarded to
H. ELION, 14 Buccleuch Place, Edinburgh.

First Prize.—Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Second Prize.—Any scientific book which is sold for about five shillings may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

MARKS AWARDED FOR ANALYSES.

2. Correspondents who are qualified :

R. Stokes (1st prize) ...	91	Heroin ...	71
H. Elion (2nd prize) ...	90	Tents ...	68
Student ...	89	Siva ...	66
Heriotonian ...	88	En Avant ...	64
L'Espérance ...	86	Virus ...	61
C. G. O. ...	85	Nomen ...	59
Hypo ...	85	Phœnix ...	59
Symbiosis ...	83	Chorlon ...	58
Argamate ...	82	Kino ...	54
Cinchona ...	82	Rego ...	43
Rainbow ...	81	Tolut ...	40
Phenol ...	79	Stannum ...	36
Barcarole ...	74	Curious ...	26

2. Correspondents who are qualified

Club Moss ...	71	Nitrax ...	95
Cobalt ...	78	Optic ...	76
Liebig ...	95	Oxo ...	92

TO CORRESPONDENTS.

STUDENT.—If the fulness of your report had corresponded to the accuracy of the results stated in it, your position would have been considerably higher. You lost several marks through omitting to give essential details of the analysis.

HERIOTONIAN.—The sodium-carbonate extract for acid radicals contained distinct traces of lead, but we were not able to obtain any precipitate resembling aluminium hydroxide or phosphate from it on neutralising it with acetic acid.

L'ESPÉRANCE.—The metallic bead "too hard for lead but not hard or brittle enough for bismuth" was no doubt an alloy containing both. You do not appear to have tested for copper or cadmium.

C. G. O.—The precipitate you supposed to be barium chromate almost certainly consisted of bismuth chromate. See the general remarks above.

HYP.—Your failure to detect the nitric-acid radical seems to have been due simply to your omitting to test for it.

SYMBIOSIS.—Since lead chloride is slightly soluble in water and in dilute hydrochloric acid, the filtrate through which you passed hydrogen sulphide was certain to contain some, and hence the sulphide precipitate should have contained lead sulphide. You found that the filtrate from the hydrogen-sulphide precipitate contained the phosphoric-acid radical, but that it did not give any precipitate on the addition of ammonium chloride and ammonia. Under these circumstances it was needless to test for barium-group metals and magnesium in it by means of the usual group reagents. See the reply to "Red Lead" and "Nitrax," in last month's report in this column, regarding the ethyl-acetate test for acetates. You do not seem to have prepared a solution to be tested for acid radicals.

ARGAMATE.—Your promptitude in applying to good purpose in this analysis the test for bismuth which appeared in the C. & D. of date coinciding with the closing day of the competition is unique in the experience of the present conductor of this column. From the way in which you obtained the precipitate that you took to be calcium citrate, we think it was calcium phosphate.

CINCHONA.—Read the fourth sentence of the reply to "Symbiosis."

RAINBOW.—The acetate separation for phosphate mixtures was unnecessary in the present analysis, when only "heavy" metals and ammonium were present.

BARCAROLE.—In testing for acid radicals you state that ferric chloride added to a neutral solution which must have contained the phosphoric-acid radical did not produce any precipitate, but ferric phosphate ought to have been precipitated. Note that sulphuric acid yields hydrochloric acid—not chlorine—by interaction with chlorides in absence of oxidising agents.

HEROIN.—You describe the powder as "apparently insoluble in water"; but if you had examined an aqueous

extract you would have found that a considerable quantity of saline matter was in solution.

TENTS.—Testing for potassium by the flame-test only, and only in the original powder, is, as we have stated in this column again and again, always unsatisfactory.

SIVA.—You ought to find a perusal of the general remarks above about lead and bismuth advantageous.

EN AVANT.—Read the replies to "Heroin" and "Siva" above.

VIRUS.—The iron which you found in quantity must have been introduced in some of the reagents you employed. The powder did not contain an arsenate.

CHORLON.—The flame-coloration imparted by barium compounds is green, not crimson. You report a "solution" of the powder as yielding an effervescence when treated with sulphuric acid, a white precipitate when magnesium sulphate was added to it, and so forth, but you omit to give any indication of how this strangely reacting "solution" was obtained.

KINO.—You will find it profitable to study the general remarks above and also a number of the foregoing replies, since various points are discussed in them which are applicable to your report.

REGO.—You appear to have conceived the notion that the powder contained tartar emetic, and to have proceeded from this to the description of reactions which might have occurred had the notion had any foundation in fact.

TOLUT.—You appear to think that an orange solution would be obtained by dissolving antimonious sulphide in a solution of sodium hydroxide, but if you try the experiment you will find that this is not the case.

CURIOS.—Even if any method of analysing unknown salts could be described as "the best," it would be impossible to give an outline of it within the limits of a reply in this column. We would commend to your notice the text-books on analytical chemistry mentioned in the last educational number of the C. & D. (August 12, 1911, index folio 300). If "Attfield" is available, you should find the analytical portions useful.

COBALT.—The precipitate which you supposed to be calcium oxalate really consisted of calcium phosphate.

OXO.—In testing for lead by means of sulphuric acid, after evaporating till acid fumes begin to be evolved it is advisable to cool the liquid and then dilute it with water, since lead sulphate is soluble in hot concentrated sulphuric acid, but practically insoluble in the dilute acid.

COLLEGE NOTES.

WESTMINSTER COLLEGE OF PHARMACY.—The following awards have been made as a result of the recent competitive examinations held at this College: Medals—*Chemistry*, Mr. A. C. Smith; *Botany*, Mr. T. H. Carter; *Materia Medica*, Mr. H. A. Bailey; *Pharmacy*, Mr. W. Greaves; *Dispensing*, Mr. S. Green and Mr. A. C. Smith. Certificates were also awarded to the following students: Mr. L. Williams, Mr. H. H. Dickmann, Mr. J. C. Bramley, Mr. T. Siminon, Mr. R. A. Brown, Mr. N. A. Nicholls, Mr. W. Wilkins, Mr. J. Penrose, Mr. O. F. G. Jones, Mr. H. Amon, Mrs. C. Wright, Miss A. Quinlan, Miss A. J. Speak, and Miss I. M. G. Davy.

LONDON COLLEGE OF PHARMACY.—The following is the list of prizemen at the recent terminal College examinations: *Chemistry*—Silver medal, Mr. W. S. Symons; bronze medal, Mr. I. L. Parry; certificates, Messrs. S. R. Davis, V. R. J. Webber, C. Baker, A. C. Cannon, P. G. Hicks, F. G. Howard, and T. Pumphrey. *Botany*—Silver medal, Mr. S. R. Davis; bronze medal, Mr. C. Baker; certificates, Messrs. W. S. Symons, G. Chalk, A. C. Cannon, T. Pumphrey, V. R. J. Webber, I. L. Parry, and P. G. Hicks. *Materia Medica*—Silver medal, Mr. W. S. Symons; bronze medal, Mr. C. Baker; certificates, Messrs. S. R. Davis, G. Chalk, A. C. Cannon, V. R. J. Webber, T. Pumphrey, P. G. Hicks, and I. L. Parry. *Pharmacy*—Silver medal, Mr. G. Chalk; bronze medal, Mr. P. G. Hicks; certificates, Messrs. W. S. Symons, V. R. J. Webber, S. R. Davis, A. C. Cannon, C. Baker, T. Pumphrey, F. G. Howard, and I. L. Parry.

SECRET REMEDIES.—The "British Medical Journal," in continuation of the series of articles on the composition of certain secret remedies, deals in the issue for January 20 with medicines for alcoholism.

GLYCERIN MANUFACTURE IN MEXICO.—U.S. Consul Alger writes that the soap works at Mazatlan, Mexico, are installing English machinery for a glycerin plant, capacity 2,600 tons of spent soap lye per year. It will start producing in January 1912 commercial glycerin (80 per cent. crude glycerin) and will use sulphuric acid. An offer has already been received from a California powder company to purchase entire glycerin output.

ENGLISH AND WELSH NEWS.

When sending newspapers to the Editor please mark the items of news to which you desire to call his attention.

Brevities.

Damage estimated at 20,000*l.* was caused by fire on January 18, at the carbolic soap powder works of Messrs. R. Wheen & Sons, Ltd., Creek Road, Deptford, London, S.E. The fire broke out in the tallow-melting department.

The recent heavy fall of snow in Birmingham indirectly caused the death of a chemist's assistant named Frederick Myring, of Yardley Road, Birmingham, who died from heart-failure, probably accelerated by the sweeping of snow away from the front of his home.

On January 17 some ointment caught fire while in course of preparation at the pharmacy of Messrs. E. Jordan & Son, chemists, of Swansea Road, Pontardawe. The conflagration was subdued before much damage had been done, but Mr. Jordan, sen., was badly burned.

Sir William Ramsay, K.C.B., F.R.S., denies a rumour in regard to having reported favourably on a process for making artificial gold. He says, "I have furnished no such report; and it appears to me in the highest degree improbable (although as a scientific man I should hesitate to say that it is impossible) that artificial gold will ever be produced."

On January 23 a fire was caused at the pharmacy of Mr. J. C. Thompson, chemist and druggist, 102 Marton Road, Middlesbrough, by some overheated soot falling from the fireplace of the adjoining shop and igniting the flooring and the staircase. The flames were confined to the upper stories, but damage was done to both the building and stock.

The Pembroke Guardians recently considered a written application from Dr. Williams for a dispensary at the Infirmary. The Master pointed out that there was a dispensary at the Infirmary at the present time, but it was empty. The Chairman said he believed that the doctor wanted drugs as well. The matter was referred to the House Committee.

During the hearing of evidence from old inhabitants in an action regarding the grazing rights on Mitcham Common, one witness stated that his father was a physic-gardener, who collected herbs for medicine. In answer to the Judge's query, "Where was the physic-garden?" the witness answered, "Oh, the whole of the common was a physic-garden in those days."

Institute of Chemistry.

At the January examinations twelve candidates presented themselves for the Intermediate examination. Of these, the following seven passed: Messrs. R. M. Doidge, B.Sc., D. R. Frazer, S. G. Greene, G. S. Heaven, B.Sc., W. Horneyman, A. Wilson, and T. Wright. Fifteen candidates presented themselves for the Final examination, and eleven passed: In branch of mineral chemistry—Messrs. E. C. Evans, B.Sc., H. W. Moss, A.R.C.Sc.I., and N. C. Nag, M.A.; in organic chemistry—D. Cardwell, B.Sc., H. Krall, B.A., F. H. Lees, and W. M. Roberts, B.Sc.; in the chemistry of food and drugs, and of water—G. D. Elsdon, B.Sc., H. Hawley, M.Sc., R. L. Morris, and F. G. C. Walker.

National Insurance Act.

At a meeting of the Chesterfield Medical Association held on January 17, the President referred to the "most radical changes" in the conduct of the Association which would be made necessary under the National Insurance Act. A difficulty arose as to whether the 1*s.* 6*d.* per head per annum allowed by the Act for drugs and medicines was sufficient to meet the cost to the Association. During 1911 the average cost of medicines and drugs supplied by the Association was 1*s.* 8*d.* per member, or 2½*d.* per bottle dispensed. The annual report of Dr. J. T. Hurst, one of the two medical officers, showed that during the year 7,036 visits were paid to 1,629 patients (of whom 1,201

were women and children). The consultations numbered 15,919, and 125 bottles of medicine were on the average dispensed each day.

Analysts' Appointments.

Mr. H. J. Evans, Ph.C., A.I.C., of the University College of Wales, Aberystwyth, has been appointed analyst to the Radnorshire County Council under the Sale of Food and Drugs Acts.

Mr. A. H. Mitchell Muter, F.I.C., has been appointed temporary public analyst for Wandsworth for a period of three months from February, at a remuneration of 10*s.* for each analysis made.

Contracts.

The Willesden Urban District Council's Contracts Committee have decided that drugs and druggists' sundries tenderers should be invited to quote the discount they are prepared to allow off their own monthly lists of current prices in lieu of the present method requesting contractors to tender according to the Council's schedule. They have further decided to abandon the practice, for the time being, of requiring contractors to deposit a sum of £10 with their tenders.

Masonic.

Mr. Chas. Weston, of Weston & Co., Ltd., chemists, Derby, was on January 18 installed Grand Master of the Masonic Lodge of Repose.

Bro. E. H. Newman, representing Messrs. Savory & Moore, Ltd., was on January 16 installed Worshipful Master of St. Paul's Lodge No. 194.

Mr. H. T. Summers, chemist and druggist, Heckington, was installed on January 11 W.M. of St. Botolph's Lodge 588 of Freemasons, at Sleaford.

Lancashire Notes.

The sale by auction is advertised of the drug-business of Mr. Henry Bland, at 59 Victoria Road, Fulwood, Preston. Mr. Bland is retiring from business and leaving the district.

The cotton strike in Lancashire has at last been settled and peace declared. A great number of trades in Cottonopolis were affected by the stoppage of the large mills, and in some instances the chemical-manufacturers had to stop their works on two days a week.

The danger of using "pottery" hot-water bottles has been illustrated by the unfortunate accident at Blackburn, which resulted in the death of a two-year-old child. The bottle had been placed in the oven, full of water, and exploded, smashing the oven door to atoms and instantly killing the child, who sat near.

At the Executive meeting of the Liverpool and District Welsh Free Church Council on January 19, the following resolution, arising out of the death of Mr. Wm. Evans, chemist and druggist (*C. & D.*, 1911, 11., 928), was carried: "That this Council begs to express its sense of the great loss by the death of Mr. Wm. Evans, J.P., who was one of the oldest and most faithful members of the Executive, and had occupied the position of President of the Council for two years."

The meeting of assistants and apprentices held at the Clarion Café, Manchester, on January 17, was an "unqualified" success. Mr. Kirkby made an excellent Chairman. Mr. Grier was elected Secretary, *pro tem.*, and a committee of five assistants were also nominated. There were six or seven master pharmacists present from Manchester and Salford, one of whom said that pharmacists' assistants and apprentices had not such a bad time as was made out by one of the speakers (an assistant), and that the wages paid would compare favourably with any other calling of a similar nature. An enjoyable evening, interspersed with music and refreshments, was spent. There was a general feeling that the ball had been set rolling to some purpose.

Sheffield Notes.

Mr. John Evans, F.I.C., the analyst for York, has been elected on the Council of the Society of Public and Other Analysts.

Mr. G. T. W. Newsholme, President of the Sheffield Pharmaceutical and Chemical Society, in his capacity as

Chairman of the Sheffield Board of Guardians, addressed a gathering of South Yorkshire Poor Law Officers in Sheffield on January 20, on the advantages of organisation. Mr. H. Antcliffe, the Hon. Secretary of the local pharmaceutical organisation, and the Sheffield Union Dispenser, was elected a Vice-President of the above Association and a delegate to the National Association Meetings.

South-Western Notes.

The large number of H.M. ships now lying in harbour at Portsmouth is beneficial to the trade of the town generally, including chemists and druggists. The hospital ship *Maine*, with a full complement of medical stores, left on Monday last for Arosa Bay.

Dr. J. C. Young, the Resident Medical Officer of the Southampton Infirmary, has been promoted by the Board of Guardians to the position of Resident Medical Superintendent, in the place of Dr. Russell Bencraft, resigned, at a salary of 250*l.* per annum, rising to a maximum of 300*l.*, with apartments, rations, and washing. Advertisements are to be issued inviting applications for the appointment of Assistant Resident Medical Officer.

A remarkable natural phenomenon—important to mineral-water manufacturers and other large users of water—and which has not revealed itself for some three years, is at the present time occurring in the Hampshire South Downs, to the north of Portsmouth. A series of springs, named the Lavants, produce a stream of beautifully clear water, coursing along 3 ft. deep at a rate equal to 25,000,000 gals. per day.

Following on the satisfactory Christmas and New Year's trade at Southampton, the abnormally damp, though mild, climatic conditions, which have lasted for so long a period in the south-western district generally have created a materially increased demand for such commodities as ammonised quinine—in all forms, emulsions, and lung tonics. Some of the leading establishments in the town have attractive window displays of a number of the popular specialities which receive considerable patronage at this period of the year. One of the most attractive in the High Street is at the retail dépôt of Luce's Eau de Cologne Co., Ltd., who manufacture this favourite perfume in the town, at 83, 100, and 102 French Street.

From Various Courts.

At Redruth County Court on January 11, Mr. Wm. Morley Martin, Ph.C., was awarded 40*l.* damages against the Cornwall County Council for injury to a motor-cycle, caused by the road between Scorrier and Redruth being left in a dangerous condition (*C. & D.*, 1911, 11., 940).

At Hastings, on January 20, three youths named Percy Alfred Wood, Harry Arthur Britt, and Albert Edward Evans, were committed for trial on a charge of being concerned in the theft of hair brushes, hair wash, and hair restorer (value 19*s.* 6*d.*), from an outside wall case belonging to Mr. Albert Ernest Bolshaw, chemist and druggist, 37 White Rock, Hastings.

At the Exeter Police Court on January 22, Edward Anderson Douglas, a groom, of New Road, Dorridge Knowle, near Birmingham, was sentenced to the maximum term of three months' imprisonment with hard labour for fraudulently obtaining food and lodgings at Exeter twelve months ago by falsely representing that he was employed by Messrs. Evans, Gadd & Co., wholesale druggists, Exeter.

In the Lord Mayor's Court, London, on January 22, judgment was entered for William Frederick Bonser, meat-salesman, Smithfield Market, who sued H. Winter, 150 Leadenhall Street, E.C., to recover the sum of 15*l.*, money lent. The plaintiff advanced the defendant 10*l.* to advertise the "H. R. Skin Food" and the "Motorists' Skin Preservative." Defendant said a company known as H. Ryland, Ltd., had been floated to work the preparation, but he had been unable to sell his shares.

Poison-licences.

The Croydon County Council on January 22 granted the following applications for renewal of poison licences:

Reginald John Cornish, corn merchant, 3 Woodside Green, South Norwood; Frank Uwins, 69 Portland Road, South Norwood; Walter Thomas Uwins, 63 Portland Road, South Norwood; John Robert Box, nurseryman, Derby Road, West Croydon; Arthur Harvey Naylor, The Nurseries, Station Road, South Norwood, and 35 George Street, Croydon; Edward William Rogers, corn merchant, 62 High Street, Croydon; Hammond & Hussey, Ltd., ironmongers, 23 and 25 High Street, Croydon; and George Dennis Yales, 38 South-end, Croydon.

Poisoning Fatalities.

Three deaths resulting from the effects of taking poison have been reported since our last issue up to Wednesday evening. At Maidstone an undertaker's assistant, named Arthur Hawkes, died through drinking carbolic acid given him to drink in mistake for brandy. At the inquest on Sydney Keat (60), coffee-house keeper, Balls Pond Road, London, N., according to the medical evidence death was caused by potassium cyanide poisoning. The inquiry was adjourned with a view to ascertaining how the poison was procured.—James Drury (71), labourer, of Harrow Road, London, W., committed suicide by taking a pennyworth of spirit-of-salt.

IRISH NEWS.

When sending newspapers to the Editor please mark the items of news to which you desire to call his attention.

Brevities.

Mr. Thos. F. Cole, Ph.C., Lurgan, was successful at the Urban Council election last week.

Mr. Mather Thomson, L.R.C.P., L.R.C.S., Ph.C., has been appointed assistant physician to the Meath Hospital, Dublin.

The annual meeting of the Chemists' and Druggists' Society of Ireland will be held in Belfast on the last Thursday in February.

A van-driver in the employ of Messrs. Bewley & Draper, Ltd., wholesale druggists, Dublin, has been committed for trial upon a charge of causing the death of a little boy by driving over him.

Sir Wm. Whitla, M.D., L.P.S.I., occupied the chair at a University Extension Lecture in Belfast last week on "Shakespeare's Tragedies," by the Rev. Edgar I. Fripp. He is Chairman of the Belfast University Extension Committee.

Master Fred Spinks, the five-year-old son of Mr. F. W. Spinks, Ph.C., Medical Hall, Tramore, secured fourth place in all Ireland out of about 5,000 entries in the "Pretty Children Competition" organised by "The Lady of the House."

At the meeting of the South Dublin Board of Guardians, Mr. John F. Jessop, Dolphin's Barn Dispensary, offered to take up the position of compounder in the workhouse at the salary paid to Mr. Fitzpatrick. Mr. F. J. Martin, compounder, Terenure Dispensary, wished to be transferred to Donnybrook. It was decided that Mr. Martin be transferred to Donnybrook and Irishtown Dispensary, and Dr. McKenna to Terenure, Mr. Martin to be transferred at his present salary, and Dr. McKenna at his present salary, with an annual allowance of 40*l.* for the rent of a house and 10*l.* for coal. (*See C. & D.*, January 13, index folio 38.)

The Sale of Methylated Spirit.

At Belfast Summons Court on January 19, Jas. Cooper, 69 Antrim Road, was prosecuted at the instance of Mr. J. J. Boyle, supervisor of Inland Revenue, for selling methylated spirit without having the required licence. Mr. Moreland Harper, for the defendant, admitted the offence, which was committed in ignorance. Defendant has since taken out a licence. Mr. Boyle said that the penalty is 50*l.*, but the Bench have power to reduce it to one-fourth; they could also recommend a reduction to any figure they thought would meet the case. The Magistrates imposed a fine of 12*l.* 10*s.*, and recommended that it be reduced to 40*s.*

SCOTTISH NEWS.

When sending newspapers to the Editor please mark the items of news to which you desire to call his attention.

Aberdeen.

Sheriff Laing, sitting at Aberdeen on January 18, was informed that the cessio proceedings arising from the estate of Mr. A. W. Berry, chemist and druggist, 1 Rosemount Viaduct, Aberdeen, had been settled, and he craved the Court to interpose authority to the joint minute to this effect. This was done.

Glasgow and the West.

Mr. R. H. Clark, C.A., 124 St. Vincent Street, Glasgow, has been appointed *curator bonis* of Mr. Robert Tocher, Ph.C., Woodhead House, Kirkintilloch.

The employés of Messrs. Rankin & Borland, chemists, Kilmarnock, were last week entertained by Mrs. Borland to a supper and dance. Over a hundred ladies and gentlemen attended. Mrs. Borland, in the course of the evening, referred to the satisfactory progress that had been made by the firm during the past year. Mr. Robert Calder replied on behalf of the employés at the works, and Mr. Andrew Wood on behalf of the shop staff.

Edinburgh.

The rather open winter is having its influence on scasonable trade of all kinds.

Result of the Edinburgh Pharmacy Athletic Club's Billiard Handicap: Mr. Ronald J. Marshall, care of Messrs. Duncan, Flockhart & Co., 1st; Mr. George Somerville, 2nd. The competition for the Davies Cup is now being played.

Edinburgh chemists are much perturbed about rumours as to what Boots Cash Chemists, Ltd., are to do in their city, and the report in the *C. & D.*, January 13, that "a shop in Princes Street was the company's object in going to Edinburgh" has induced one of them to break into song:

Perplexed, the chemist mopped his fevered brow,
And limply sank upon the softest seat.
"Alas!" he moaned. "I see things clearly now.
Boots merely wished a shop in Princes Street!"

"And yet I thought that they had hastened here
To snatch from me my daily bread and meat.
Away to Nottingham with foolish fear!
Boots merely wished a shop in Princes Street!"

"Once I was fain to wander in the glare,
Dreaming that Nance or Jane I might there greet;
Love I desired—oh, grasping youths, beware!—
Boots merely wished a shop in Princes Street!"

"The moral that I gained from those dead days,
When all the world seemed lying at my feet,
Is this: 'Thrust Greed aside, it never pays.'
Boots merely wished a shop in Princes Street!"

"And in ten thousand Sabbath-schools, some day,
The children of the future will repeat
Those words, to brace them for the coming fray:
Boots merely wished a shop in Princes Street!"

Comments, relevant and otherwise, are still being made upon the Insurance Act. In the course of a lengthy epistle "A Dispenser" alleges that a doctor was in the habit of using "Pulv. Soda Pink" (prepared by mixing sod. bicarb. and red ink) for various kinds of powders. Another gentleman boldly states on the same page that five to one is a safe offer that in a month or two the doctors "will be tumbling over each other" to secure the hitherto despised insurances.

POPPY-GROWING IN RUSSIA.—The Russian Medical Council (says the "Chemical Trade Journal") having considered a private application for permission to sow poppy-seed for the purpose of producing oil and opium from it for sale in Russia and abroad, sees no objection to it. The products of the poppy have not hitherto been manufactured in Russia. The Council recommends a strict superintendence of the growth and disposal of the products to prevent the opium from being smoked; that it should always be sold wholesale—and in pharmacies only where similar products are allowed to be sold.

FRENCH NEWS.

(From the "C. & D." Paris Correspondent.)

M. JEAN MOREL, the pharmacist ex-Minister of Colonies, is now a member of the French Senate.

MUSHROOM-POISONING.—Some serious accidents of recent occurrence have induced M. Gueguen, Professor at the Paris Superior School of Pharmacy and ex-President of the Mycological Society of France, to consider seriously whether nothing further can be done to protect the Parisian public from the danger of poisonous mushrooms. The sale of these is regulated by the Royal Decree of June 12, 1820, which, the professor notes, is substantially a confirmation of the police regulation of 1782. He states that "The fatal cases which occurred at the end of the year 1911 were due to poisonous amanites bought by several families from the same dealer, who in his turn received them direct from the Loiret Department. The sender said he had forwarded to Paris for the last twenty years mushrooms gathered from the same spots, and had never had an accident. But this year amanites were very plentiful, and he had himself been nearly poisoned." All this simply proves, said M. Gueguen, that a strict inspection is necessary. His idea is to give the police some elementary mycological instruction—just sufficient to enable them to identify the half-dozen poisonous and the three or four dangerous species.

TWO NEW PRESIDENTS.—M. Gabriel Lippmann, the President of the Academy of Sciences for 1912, was the 1908 Nobel Prizeman, and is well known in connection with his discoveries in colour-photography. He is a native of the little Duchy of Luxembourg, having been born at Hallerich in 1845, and was a pupil at the famous Ecole Normale of Paris. It was in 1891 that his direct method of colour-photography brought him into the "public eye." He has held a Chair at the Sorbonne as Professor of Physical Sciences since 1893, and his wife is the daughter of a member of the Académie Française (M. Cherbuliez) whose literary works are well known.—The name of M. Charles-Marie Gariel, President of the Paris Academy of Medicine for 1912, will be familiar to pharmacists as that of the representative of the French Ministry of the Interior at the Brussels International Conference for the Unification of Potent Medicaments (1902). He was (like the present Director of the Paris Superior School of Pharmacy) a student of the Paris Polytechnic College, and after commencing his career as Assistant Professor of Physical Science, became Professor of Chemistry at the National Engineering School (Ponts et Chaussées), and subsequently at the Paris Faculty of Medicine. He has been a member of the Academy of Medicine since 1882.



M. GABRIEL LIPPMANN.



PROF. C. M. GARIEL.

ART AND MEDICINE.—Though the Paris School of Medicine cannot boast mural paintings to compare with the remarkable compositions of Besnard at the Superior School of Pharmacy, it nevertheless contains some paintings and busts noticeable both from the artistic and the historical standpoint. The paintings include portraits of Guy de Chauliac, Guy Patin (by Antoine Masson), de Lassone, physician to Louis XVI. and Marie-Antoinette, G. J. de Lepine by Nattier, and two remarkable productions by Hyacinthe Rigaud, Silva and Lapeyronie, Corvisart (Napoleon's head physician), Pinet of the Salpêtrière, Laennec, Dupuytren, etc., are represented

by medallions. Germain Sée's portrait is by Yvon, and Marjolin's by Ary Scheffer. Passing from painting to sculpture, one notices Ambrose Paré, a bronze of Astruc (Louis XIV.'s doctor), Pigalle's remarkable marble bust of Ferrein, Houdin's equally life-like representation of Antoine Petit, busts of Sabatier, Gavarret, Parrot, and de la Martinière. A set of Gobelins tapestries of the epoch of Louis XIV., from designs by the celebrated Lebrun, represent the Four Elements; a fifth tapestry is Bennet's "Death of Duguesclin." Finally, in the place of honour at the head of the grand staircase hangs André Brouillet's pathetically sincere composition representing the ambulance installed in the foyer of the Comédie-Française during the siege of Paris in 1871.

INDIA AND THE EAST.

(From the "C. & D." Correspondents.)

OPIUM AND MORPHINE LICENCES IN BENGAL.—In further reference to the opium and morphine licences in Bengal, no further progress has been made towards removing the existing difficulties which beset the would-be importer of opium, cocaine, hemp preparations, etc. As it is, only eleven firms are allowed to import at present, but others are not without hope of an amendment in the regulations shortly.

CONGRESS AT HONG-KONG.—The Far Eastern Society of Tropical Medicine has been holding a congress at St. Andrew's Hall, Hong-Kong, and on the occasion Messrs. Burroughs Wellcome & Co. made a display of medicines and medicine chests and cases, which attracted much attention. A feature of the exhibit was the specimens of quinine and quinine salts from the firm's factory, these being shown in the loose state as well as in "tabloid" form.

COCAINE SMUGGLING IN INDIA.—It is interesting to learn that cocaine smugglers are now being very severely dealt with in India. Recently three or four Europeans were sent to prison for one offence (their first), without the option of a fine. The fact that they were foreigners and pleaded ignorance was of no avail. The Excise Commissioner for Bengal, in his annual report for 1910-11, commented on the fact (C. & D. November 25) that magistrates often fail to realise the absolute futility of inflicting lenient punishment on the offenders they convict, but in view of the above facts the charge is not fully justified.

NEW INDIAN OPIUM REGULATIONS.—The new opium regulations regarding the export of Malwa opium are causing concern among shippers at Bombay, says the "Indian Agriculturist." There are two special features in them. The first is the new rule prescribing auctioning the right of export. Hitherto merchants have taken up all possible passes for Malwa, and re-sold them to exporters. The result has been that the whole benefit of high prices in China has come to the original holders of passes, who took up enough in 1909 to cover all possible exports up to one-third of those permitted in 1912, and then sold passes to speculative bidders, the latter, of course, paying for a Rs. 600 pass, the face value, *plus* whatever remained after buying the case of opium for Rs. 800 and allowing for a fair profit retained out of the huge sum realisable in China. By auctioning the right of export the Government transfer to their own hands the speculative profits which will now be realised, not on the re-sale of passes, but on the sale of export right. Merchants recognise that, having been far too clever for the Government in 1909, they have little to complain of so far, but complications are added by a notification lately issued by the Bombay Customs authorities to the effect that all opium which was passed for export in 1911 must actually be exported by the end of 1911, and that all opium for which passes for 1912 have already been issued, that is, from 2,000 to 4,000 cases, must be exported before the end of February next. The effect of this regulation, coming on top of the chaotic state of politics and trade in China, places opium merchants and shippers who already have large stocks in

China in a position the reverse of pleasant. Merchants point out the urgent necessity of a revision of the new Customs orders, so as to extend the time within which exports may be despatched. In the present circumstances nearly 8,000 chests of opium will have to go between December and the end of February to swell the already inflated stocks in the Far East. Merchants claim that even if treaty engagements with China prevent an extension of the period for 1911 exports, the February limit for next year's passes already issued should be abolished.

PHARMACY IN THE PUNJAB.—The annexed photographs show the staff and branch premises of the Punjab Drugs and General Stores, Co., Ltd., Multan City, the centre of trade for the Punjab. The business was established in



1902 as Shankar Nathkapar & Co., who amalgamated their drug business with the company in 1907. Dr. Kapar, the founder of the business, had been in the medical and diplomatic services. Last summer he visited



England, the Continent, and the United States. His is the figure with the cap in the centre of the group, and the two medical members of the staff at the principal shop are at each side of him.

BUSINESS KNOWLEDGE is essential to everyone connected with the retail drug-trade. It helps to turn examination knowledge into money. A great aid to getting business knowledge is our book entitled "Opening a Pharmacy," published at 2s. 6d. (by post from 42 Cannon Street, London, E.C., 2s. 9d.). It may be obtained from most wholesale houses at the published price.

CHINESE CAMPHOR.—In reporting on the trade of Foochow, the American Consul states that the manufacture of crude camphor has fallen off greatly, dropping from 524,800 lb. in 1909 to 130,800 lb. in 1910. The largest factory, which was conducted by a British firm, has gone out of the business, and there is at this time (December) only one important factory left. Crude camphor is scarce, and the up-country forests do not promise any increase in supply.

OUR AMERICAN LETTER.

(Special Correspondence to the "C. & D.")

Paying Telephones.—One of the practical aims of the N.A.R.D. is so to develop the use of slot telephone instruments in drug-stores as to turn the telephone from a source of pure expense to a source of financial profit. At the Niagara Falls Convention it was decided to employ a telephone expert to travel about the country, particularly in the larger cities, in an effort to get the pharmacists and telephone companies to agree on this proposition. In some cities the conditions are very gratifying. In Philadelphia, for instance, slot telephones have been installed in 810 chemists' shops, and in all but about 300 cases the druggists do business enough to earn a commission on all receipts of 33½ per cent. This means that they realise an income of from \$50 to \$200 a year, whereas before the day of slot phones they were subjected to a rental of \$80 or \$100, which represented pure loss. Now the telephone company in New York has notified the chemists that the commission has been reduced from 20 to 10 per cent., and the entire drug-trade is up in arms over the announcement. Several protest meetings have been held, and a committee has been appointed to call upon the telephone company and request that the commission be put back at least to 20 per cent., but that a 30-per-cent. commission be granted.

Food and Drugs Act Decisions.—The following are some recent decisions regarding the misbranding of products under the Food and Drugs Act: "Humbug Oil," consisting of turpentine 20 per cent., linseed oil 20 per cent., and 60 per cent. of hydro-alcoholic solution of ammonia water, ammonium salts, and a volatile alkaloid, probably conine. Held to be misbranded because of the statement that it "relieves diphtheria of the most malignant type." "Eg Nutrine, whole Egg Substitute," stated to yield a product which compares in working properties with eggs. Held to be misbranded as calculated to lead a purchaser to the belief that it contains egg.—Sodic aluminic sulphate, found to contain arsenic (60 mg. per kilo.), and hence held to be adulterated. "Dr. Moffett's Teethina," consisting of opium, calomel, calcium carbonate, and powdered cinnamon. Misbranded because of the claim that it "aids digestion, heals eruptions and sores, will stop the tendency to colic, and has saved the lives of thousands of children." Turpentine containing 8 per cent. of mineral oil, held to be adulterated. "Rheumatic Cure," containing rhubarb and alcohol. Misbranded because of the statement, "guaranteed to cure the most stubborn case of sciatic or muscular rheumatism." "Cerrodanic capsules," claimed to be a "positive cure for rheumatism," consisted of sodium salicylate, potassium nitrate, and charcoal, with capsicum and an unidentified oily substance. "Extract Pistachio," misbranded because it was an artificial flavour, and not a true extract of pistachio. "Gessler's Magic Headache Wafers," consisting of caffeine and acetanilide, held to be misbranded as the label declared the article to be free from harmful substances. "Extract of Vanilla," consisting of a coloured solution of coumarin, held by the Court to be misbranded. "Olio Finissimo D'Oliva Vergine," containing 57 per cent. of cottonseed oil, held to be misbranded as it was not pure virgin olive oil. "Sweet Spirits of Nitre," "Laudanum," and "Sun Cholera-mixture," held to be misbranded, the first two because they were not of U.S.P. standard, and the third because the opium and alcohol which it contained were not declared on the label. "Kopp's Baby's Friend," a sweetened solution of morphine sulphate (one-ninth of a grain to the fluid ounce), recommended, among other claims, for wind, held to be misbranded. "Dr. Kline's Great Nerve Restorer," containing 12.78 per cent. of potassium bromide and 6.15 per cent. of ammonium bromide, claimed to be misbranded owing to the therapeutic uses given on the label. "La Sanadora," for internal and external use, containing alcohol, opium, chloroform, ammonium hydroxide, oil of peppermint, etc., held to be misbranded because the label contained no statement of the proportions of alcohol, chloroform, and opium. "Nerve Gum," a chewing-gum claimed to be a tonic for the nerves, and on this account held to be misbranded. "Dr. Peeble's Brain-restorative" and "Dr. Peeble's Nerv-tonic," the former containing ammonium, sodium, and potassium bromides and valerian, and the latter vegetable products of a non-alkaloidal nature, held to be misbranded owing to statements on the label that they possess therapeutic properties of high value in the treatment of epilepsy and diseases of the brain and nervous system. "Dr. Detchon's Relief for Rheumatism," composed principally of sodium salicylate, and held to be misbranded because of the curative properties claimed. "Dr. Lindley's Epilepsy Remedy," containing bromides and a volatile oil as flavour, held to be misbranded because of the claim that it is a "positive cure" for epilepsy, etc., and did not bear on the label a statement

of the quantity of alcohol it contained. "Improved Sodic Aluminic Sulphate," containing 10 parts per million of metallic arsenic, held to be misbranded and ordered, among other decrees, to be labelled "Sodic Aluminic Sulphate and Arsenic. Not to be used for food." "Sweet's Honey Vermifuge" (a "dead shot for worms"), consisting of senna, santonin, sodium salts, etc., in hydro-alcoholic solution, held to be misbranded because the label stated that it contains 10 per cent. of alcohol, whereas it only contains 3.5 per cent., no appreciable amount of honey is present, as would be implied from the name, and santonin is not "perfectly harmless."

OUR GERMAN LETTER.

(Special Correspondence to the "C. & D.")

Pharmacists in the Reichstag.—Two pharmacists, Messrs. Hartrath and Thumann, "Centre" candidates for the Alsatian constituencies of Trier and Gebweiler, have been returned to the new German Reichstag. Hitherto the only representative of pharmacy in the Reichstag was Dr. Burckhardt, member for Dillenburg-Oberwesterwald.

The Prussian Budget contains a welcome innovation regarding the remuneration of the pharmaceutical members of the Commissions appointed for inspecting pharmacies. Hitherto they have received a daily allowance to cover the cost of travelling and incidental expenses. This is now to be supplemented by a special grant of 10s. for each pharmacy inspected, in addition to 1s. 6d. towards the cost of reagents used in carrying out tests. There are about ninety pharmaceutical inspectors in Prussia, who visit annually about 1,500 pharmacies, so that this means an expenditure of 2,875l. The special courses of instruction in the analytical methods of the new pharmacopœia for the benefit of the inspectors are to be repeated this year on behalf of the thirty members who have so far not attended, this entailing an expenditure of 450l.

Methyl-alcohol Poisoning.—The cases of poisoning among persons frequenting the night refuges in Berlin continue to excite considerable interest, the deaths which have occurred being now unanimously attributed to methyl-alcohol poisoning. A traveller named Meyen, who is stated to have acted as representative of the druggist Scharmach, has been arrested. The case against Scharmach himself is practically complete. His defence is that he acted in good faith in selling the artificial spirit, of which he and his friends had frequently partaken. His contention is that methyl-alcohol, like ethyl alcohol, is only poisonous when taken in large quantities, whereas other opinions are that the poisonous nature of methyl alcohol was known, and that cases of poisoning have occurred even from the use of methyl-alcohol in hair-lotions, bay rum, etc.

Packed Specialities.—The increasing output of packed specialities by manufacturers of pharmaceutical preparations, and the tendency of the latter to issue synthetic drugs in original packages, is the subject of constant controversy between pharmacists and manufacturers. The former view with apprehension the detrimental effect which this form of prescribing has on the returns from dispensing, as naturally the charges for compounding a prescription cannot be applied to the act of handing out a ready-packed speciality. A new factor has now entered the arena in the person of the doctor. Recently several medical associations have discussed the drawbacks attending the dispensing of preparations labelled with their full designation, in many cases supplemented by directions for use or by a list of indications.

Wrapping-papers.—Doctors also take exception to another feature which, in their opinion, conduces to self-drugging; this refers to the use of wrapping-paper extolling the merits of certain specialities. The use of white paper and sealing-wax, inseparable from the smart finish of the English chemist's packages, is practically unknown in the land of pharmaceutical monopoly; it would be regarded as a waste of time and—a more important consideration—of money. Several firms supply pharmacists, free of charge, with blocks of wrapping-paper in the form of circulars, and naturally a considerable use is made of this economical substitute for tissue paper. The doctors have therefore passed a resolution calling upon the pharmacists to desist from this practice, and suggestions have been advanced that the pharmacists should co-operate to buy as cheaply as possible the necessary wrapping-paper. A large number of apothecaries have agreed to adopt this suggestion, as well as to meet the doctors' wishes in the matter of dispensing specialities. This is to be effected by not handing over the ready-packed product when the prescriber adds the words "sine confectio"; in this case the contents of the original package will be dispensed in an ordinary bottle or box, and provided with the directions for use stated on the prescription.

LEGAL REPORTS.

TRADE LAW.

A Chemist Sued.—In the Shoreditch County Court on Tuesday, before his Honour Judge Smyly, K.C., Henry Gordon & Blumberg, Ltd., of 57 Chiswell Street, E.C., wholesale druggists, sued Mr. Francis T. Pomeroy, chemist, of London Road, Thornton Heath, to recover 2*l.* 4*s.* 1*d.* under a judgment summons. The plaintiffs' representative said the defendant had a good business and was well able to pay. Judge Smyly ordered a third to be paid each month, with a ten-day committal in default.

Trade Debt.—In the City of London Court on January 19, before Judge Rentoul, K.C., Messrs. A. Kingsley & Co., druggists, 20 Great Winchester Street, E.C., sought to enforce payment of 1*l.* 12*s.* 8*d.* due for drugs supplied to the defendant, Mr. Thomas Bloodworth, trading as Worth's Drug-stores, 18 Exmouth Street, Clerkenwell. Defendant said he did not own the business. Plaintiffs' representative said that the defendant was the manager of the business, and it was his only support. Defendant said for the moment he was the manager, and he had 2*l.* a week; but he had a wife and children to support. The debt was for patent medicines supplied to him in the way of his trade. Judge Rentoul, K.C., ordered payment of 5*s.* a month, with committal in default.

Loan by a Chemist.—Before Mr. Justice Phillimore, in the King's Bench Division of the High Court of Justice, London, on January 24, Mr. Alfred B. Makepiece, chemist and druggist, Sydenham, sued Mr. Augustus Ferdinand Harris, of the firm of Messrs. Seward & Harris, City financiers, to recover 150*l.* 2*s.* 5*d.* due upon a promissory note. Liability was denied by the defendant upon the ground that Mr. Makepiece was an unregistered money-lender. Alternatively he pleaded that the interest was excessive. It appeared from a statement by Mr. Francke, on behalf of the plaintiff, that Mr. Makepiece was asked by Mr. G. Evans, a friend, if he would lend Mr. Harris 100*l.* for three months, and he would pay 50*l.* for the accommodation. Mr. Makepiece agreed to lend the money, and was given a promissory note for 150*l.*, and Mr. Evans undertook to see the amount paid. Mr. Harris gave Mr. Evans 20*l.* for obtaining the loan. There was no ground for the defence that Mr. Makepiece carried on the business of a money-lender, and Mr. Harris fixed the rate of interest himself. Mr. Makepiece was giving evidence in support of this statement when there was a consultation between counsel, which resulted in judgment being entered for Mr. Makepiece for the full amount.

High Court Cases.

Unless when otherwise stated these cases have been heard in the High Court of Justice, London.

CARTER'S LITTLE LIVER PILLS.

In the Chancery Division, before Mr. Justice Eve, on Friday, January 19, Mr. Sebastian, for the Carter Medicine Co., Ltd., moved for an injunction to restrain Henry Skelmerdine, of Manchester, from passing off certain pills as Carter's Little Liver Pills. For the defendants it was stated that the papers in connection with the case had only arrived from Manchester on the previous day and they asked that the motion stand over for a week. On the defendants giving an undertaking in terms of notice of motion this course was agreed to.

A GREENOCK CHEMIST'S SEPARATION.

In the Court of Session, Edinburgh, on January 20, Lord Hunter disposed of an action for separation and aliment at the instance of Wilhelmina Florence Torbet, or MacNaught, against her husband, Archibald H. MacNaught, chemist and druggist, Greenock. Pursuer was married to the defender in September 1908. They had not lived happily. Other evidence was to the effect that defender had left the country with Esther Sloan, who had been an assistant in his Glasgow shop. Mr. MacRobert, pursuer's counsel, stated that although the defender's estate had been sequestrated he had four chemists' shops—one in Greenock, one in Port Glasgow, and two in Glasgow—that his life was insured for 1,000*l.*, and that he had an interest in a manufacturing chemist's business, a wholesale drapery business, and other concerns, and that his father had left 35,000*l.*, in which he had an interest, which had not been distributed. His Lordship granted pursuer decree of separation with custody of the child, and aliment at the rate of 100*l.* a year for herself and 30*l.* for the child.

ELLIMAN'S EMBROCATION.

In the Chancery Division on Friday, January 19, Mr. James Elliman (carrying on business as Elliman, Sons & Co., Slough) moved, before Mr. Justice Neville, for the committal to prison of "Father Sequah" for contempt of court. It was complained that in defiance of a perpetual injunction granted by Mr. Justice Swinfen Eady on December 15, 1903, restraining "Father Sequah" and "Madame Sequah," his wife, from representing, contrary to the fact, that they were in possession of, and were able to communicate, secret recipes belonging to the plaintiff. "Father Sequah" had recently been selling in northern towns, and chiefly in Manchester, a mixture at 4*d.* a bottle, called "Prairie Flowers," for indigestion, and he stated that in each packet, written by his own hand, was contained the recipe for making Elliman's Embrocation, which recipe he gave to any purchaser of a packet of Prairie Flowers. He then proceeded to compound a mixture in presence of the people, and said to them when he finished shaking it: "This is Elliman's Embrocation made in your presence as I have been making it here for six weeks every Saturday. I am going to teach you how to make it for 4*d.*, and do not forget to teach it to your children. It would cost you 1*s.* 9*d.* a bottle to buy it." Mr. A. C. Nesbit, who appeared for Mr. Elliman, adduced other evidence. "Father Sequah" did not appear, and his Lordship made an order for his committal to prison, and directed that he should pay the costs of the motion.

RUPTURE APPLIANCE DISPUTE.

In the King's Bench Division on Friday, January 19, Mr. Justice Hamilton continued the hearing of an action by which Mr. Chas. E. Esselstyn Brooks, trading as Brooks' Rupture Appliances Co., of Marshall, Mich., U.S.A., sought an injunction to restrain Mr. Austin Brookes and Mr. W. Baily, of Queen's Square, Leeds, from holding themselves out as in any way connected with the plaintiff's company. Mr. Compston appeared for the plaintiff; Mr. Grimwood Mears was for the defendant Austin Brookes; and the defendant Baily did not appear. The case was mentioned in the *C. & D.*, January 20, index folio 71. Evidence on behalf of the plaintiff was given by Mr. A. L. Wright, his manager, who stated that the headquarters in this country are in Kingsway, London, and the company had spent nearly 10,000*l.* in newspaper advertising and had established a considerable business here, from sixty to sixty-five appliances now being sold daily. Evidence was also given by Mr. Caygill, of Leeds, who had had dealings with Mr. Austin Brookes. Mr. Austin Brookes gave evidence in his own defence, denying that he had ever represented that he was in any way connected with the plaintiff's company. Mr. Justice Hamilton eventually entered judgment in favour of the plaintiff for an injunction against Mr. Austin Brookes restraining him from selling rupture appliances or similar appliances so as to represent to purchasers that they were made by the plaintiff, and an injunction against Mr. Baily restraining him from representing that he is an agent or representative of the plaintiff.

"KARLSBADER WASSER" AS A TRADE MARK.

An application was made in the Chancery Division, before Mr. Justice Eve on Friday, January 19, by the community of the City of Carlsbad for the registration under the Trade Marks Act, 1905, of a trade-mark applied to medicinal waters exported from the City of Carlsbad in the Empire of Austria. Mr. Lawrence, K.C., said the trade-mark was one which required the sanction of the Board of Trade or of the Court, and he understood there was no opposition to its registration. The trade-mark consisted of the words "Karlsbader Wasser," and it had been a registered trade-mark in Austria for the past 16 or 17 years. The Trade Marks Act of 1905 made it compulsory for registration to be made in England. Counsel was proceeding to speak of the thermal springs at Carlsbad when his Lordship asked: Is that where the plums come from—

Mr. Lawrence: I never connected the two.

His Lordship: They will be more appetising than the water, I expect.

Mr. Sargeant, on behalf of the Registrar of Trade Marks, said he was satisfied that applicants had an

absolute monopoly of the water from these springs, and though it was unusual to register as a trade-mark the name of the district from which a material came, that objection was done away with if it was shown that the material was and would in all probability remain an absolute monopoly. He had no objection to the registration of the name if the applicants gave an undertaking similar to the one given in the "Apollinaris" case.

Mr. Lawrence stated that the undertaking was to the effect that the trade-mark should be used only as long as the monopoly existed.

Leave to register was granted.

CAPSULOIDS CASE.

This case is dragging slowly along. At the present rate it may last for a fortnight yet. Dr. Dixon, of the plaintiff company, was severely cross-examined on Friday last in regard to the finances of his companies and his litigations. He has since caught a cold, and on Monday Mr. E. J. Parry, B.Sc., expert witness for the Capsuloids Co., gave evidence. The defendants are represented in court by (besides counsel) Mr. James L. Ewing and Dr. W. Inglis Clark (partners), Mr. A. P. Atkinson (London manager), and Dr. F. W. Passmore as expert witnesses. Representatives of Messrs. Denoual & Co., R. Ferber & Co., and other capsule-manufacturers, are interested listeners.

Mr. Muir Mackenzie on January 19 resumed, in the Official Referee's Court, the hearing of the action brought by Capsuloids (1909), Ltd., against Messrs. Duncan, Flockhart & Co., manufacturing chemists. Our last report (C. & D., January 20, index folio 70) left off during the cross-examination of Dr. G. E. Dixon, managing director of the company, by Mr. Clavell Salter, K.C., leading counsel for the defendants, who resumed on Friday by questioning witness about the losses suffered by the companies through two fires and dishonest bookkeepers. Dr. Dixon stated, in answer to further questions, that from time to time he had employed in connection with the making of these capsules Messrs. Parke, Davis & Co., Mr. Douglas Warburton Bull, Messrs. Robert Ferber & Co., Messrs. Denoual & Co., and Messrs. Warrick Bros. Out of these five witness had brought proceedings against two, and three others had brought actions against him. The cross-examination continued thus:

Mr. Salter: Besides those five, since then you have made contracts with Messrs. John Tye & Son and Messrs. Howard Lloyd & Co. Are they making contracts with you to-day?—Yes.

Mr. Salter: You complain that a large number of my clients' goods were delivered to you as hard as bullets. If that were true that would mean that they were over-dried?—I am not a capsule-maker. I am told that you cannot make capsules very hard without drying, but I am not an expert. Dr. Dixon added that his considerable knowledge of gelatin in connection with the making of capsules was very recently acquired. He did not practise as a medical man in this country, and he was not on the register.

Mr. Salter: Would it be true to say that before you made this contract with the defendant company the business of your company was dwindling rapidly?—No, sir.

Would it be true to say that you took a contract with Messrs. Duncan, Flockhart & Co. for a large number of capsules in order to get a favourable quotation?—No, sir.

Would it be true to say that you made complaints whenever you wanted to postpone payments or check deliveries?—No, sir. On each occasion Mr. Atkinson agreed absolutely that our complaint was well founded.

When you wanted goods did you press for speedy delivery?—No, sir.

And when you did not want any more goods did you make complaints?—No, sir.

Did you bring this action in order to explain to your shareholders and cover the disastrous results of your trade?—No, sir. The action was forced upon me by the defendants for breach of contract in their refusing to act in normal business fashion. It has destroyed the capsuloids business practically.

Mr. Salter: The Court has to decide that question. We are all agreed that the capsuloids business has gone. Did your business in Denmark fall off in consequence of your exposure by the Danish medical papers?—No, sir, the medical papers did not expose me.

Has your business in this country gone the same way as in Denmark?—No, sir; there is no similarity.

Then was the business all right till the bad capsuloids came along?—Yes, sir.

That you swear?—Yes, sir.

The witness was cross-examined at considerable length concerning the associated businesses of the old Capsuloids Company, Ltd. These included "Tablones" (afterwards called Cicfa), "Hæmogallobes," as well as "Antitoxin." The Figuroid Co. was formed four or five years ago, and witness is still its managing director. He formed the Capsuloids Co., Ltd., in 1902, and sold its business to the plaintiff company in May 1909. In the autumn of 1908 and the spring of 1909 he tried to bring out a company called the Capsuloids Proprietary, Ltd., and issued a prospectus, but the scheme was not continued. He admitted starting an advertising agency under the name of "Kasler & Wolfe."

Further close cross-examination on matters of finance followed in connection with the old and new companies, and eventually Mr. Salter asked the witness if it were not true that a distress for rent in February 1910 was levied on them when they occupied rooms at premises on Holborn Viaduct. Witness admitted that that was so, and that 171l., a quarter's rent, was owing, but he asserted that this was quite a friendly distress. He also admitted that the man in possession received every day the day's takings, which on the first day were under 2l. The witness denied that he had had trouble with mouldy capsuloids before, although he admitted that he had written to Messrs. Denoual and Messrs. Ferber as to the best method of preventing mould. He believed that he had complained to both of these firms as to bad taste and smell. He did not remember their attributing that to the hæmoglobin. Other questions and answers were:

Did not Denoual say that hæmoglobin caused the bad taste and smell? asked Mr. Salter. Dr. Dixon: I remember that he attributed the smell to anything and everything but what it was.

Mr. Salter: I say he put it forward as the cause of the bad taste and smell. Did Ferber also say that hæmoglobin occasioned the bad smell and taste? Dr. Dixon: If he did, he was making a foolish statement.

Why did you not explain that Messrs. Duncan, Flockhart & Co.'s alleged negligence had destroyed the business in capsuloids in your report to your directors?—Dr. Dixon replied that this was done verbally.

Mr. Salter: Why was it not done in the report in writing?—We thought it best, as the matter was coming into the courts, to leave it out of the balance-sheet and explain matters verbally.

The cross-examination continued in regard to discussions which witness had had with the defendants' representative regarding the smell of the capsuloids and the means to be taken to get rid of it. Witness insisted that it was the gelatin, not the hæmoglobin, that produced the smell.

DR. DIXON LOSES HIS VOICE.

The Court sat again on Saturday, January 20, and when Mr. Muir Mackenzie took his seat for the purpose of hearing the continued cross-examination of Dr. Dixon, that witness was present, much muffled up and suffering from cold and loss of voice. On his behalf Mr. Mitchell Innes, K.C., asked that his further cross-examination should be postponed, and suggested that Mr. Parry's evidence might be taken in the meantime.

Mr. Salter said he thought it desirable that the cross-examination of the doctor should not be interrupted.

Mr. Muir MacKenzie remarked that he was not unwilling to adjourn, but this case was an expensive business, and he had plenty of work to do besides. If both parties were agreed as to the adjournment, that would be done.

The Court accordingly adjourned.

When the hearing was resumed on Monday, January 22, Dr. Dixon was present, but he was still unable to speak. Mr. Muir Mackenzie told him that he might go home, adding that if necessary the rest of his cross-examination would be taken at his (Dr. Dixon's) residence.

Mr. Ernest John Parry, B.Sc., F.I.C., etc., 56 Great Dover Street, S.E., was then called on behalf of the plaintiff company, and, in reply to Mr. Mitchell Innes, K.C., stated that this mixture of hæmoglobin and oil was frequently used for these and other capsules. If anything there was less tendency for hæmoglobin ground in olive oil to create mould, for the oil had an absolutely protective action. He attributed mould formation on capsules to insufficient drying of the gelatin envelope, and

explained how that envelope is made from gelatin with other ingredients, of which the essential ones are glycerin and water. Some makers added glucose or sugar, which he considered to be not only unnecessary, but distinctly harmful. A mass of gelatin he produced was eminently decomposable and would eventually go mouldy in the course of days or a week or so, for reasons which he stated. He also explained to the Court how capsules are made and filled, mentioning the precautions that are necessary, and explaining that after the capsules are sealed the excess of water is removed either by a chemical process or by laying them out on trays in a room which had a proper temperature and proper currents of dry air. If they should have been made dirty at all in the course of manufacture they are washed. The proper period of time in which to dry depends very largely on the conditions of weather and the efficacy of the drying chamber. They can be dried in these conditions in about seven days, but most careful manufacturers preferred a fortnight or three weeks, sometimes even a month. The witness then proceeded to narrate experiments he made on behalf of the plaintiffs as from August 1910, and as a result of which he came to the conclusion that the gelatin coating was responsible for the trouble. At Chappel Court, Borough, Dr. Dixon had shown him tins of capsuloids covered with an incipient growth of mould. The gelatin had partly liquefied and run into a semi-solid mass covered with mould. He was of opinion that the capsules had been improperly dried before they left the works. Witness was then asked about hæmoglobin, and stated that Merck, who supplied it in this case, were second to none, and as long as the hæmoglobin is ground in oil it can be filled into capsules without fear of decomposition from moisture. Witness had come to the conclusion that the results obtained both by Dr. Flimm and the chemists in the defendants' laboratory concerning moisture and temperature of hæmoglobin—9 per cent. of moisture and 100° C.—were erroneous, because hæmoglobin would decompose at that temperature. Finally, witness answered questions in regard to the therapeutics of hæmoglobin. After luncheon he was cross-examined by Mr. Clavell Salter, K.C., on behalf of the defendants. He stated that it was in reply to a telephone message that he went to plaintiffs' premises in August 1910, and the opinion that he then formed that the mould was due to insufficient drying was based on visual examination only. He did not notice rust on the tins. It was not until September that the capsuloids were examined in his laboratory. Asked if he could account for the delay occasioned by Dr. Dixon in notifying the defendants following these investigations, Mr. Parry said he presumed that Dr. Dixon was treating it as one of a series of complaints. He admitted that he had not made any examination of the defendants' gelatin to see if it were of good quality, and that he had not asked to see it. He had a reason for not asking, because when the question cropped up disclosure was made of the source of supply of the defendants' gelatin and the price paid for it. He had advised the plaintiffs that there was not the slightest need to pursue the question as to the gelatin being at fault. An interesting passage here followed regarding the composition of the gelatin envelope. As regards sugar, witness stated that its presence in flexible capsules favours the growth of mould, whereupon Mr. Salter produced "The Art of Dispensing" (an early edition), in which formulae were given containing sugar and honey, one of them, for hard capsules, being gelatin 6 oz., gum acacia 1 oz., powdered sugar 1 oz., and water 5 oz. Witness said such a formula is workable, but the mass for flexible capsules is better if it contains no sugar. He was also questioned as to the amount of water in the capsule envelope, and as to his practical knowledge of capsule-making; regarding the latter he stated that his father is one of the oldest capsule-makers in England, and he has been indirectly associated with him for over twenty years. He denied that capsules, properly made and properly kept, lose moisture in hot weather. In regard to moisture in the hæmoglobin and its probable effect upon the gelatin envelope, he said that up to 20 per cent. of moisture in hæmoglobin would not affect the envelope. He explained the peculiar property of glycerin to retain water up to a certain point: it is

the aim of the capsule-maker to get it at that point, the hæmoglobin would stick to its own moisture, and the gelatin envelope would not absorb it. The percentage of moisture varies in capsules. Mr. Salter wanted to know the range, and witness pointed him to the formulae "The Art of Dispensing," where in one case there was 100 in 200 and 45 in 88. Witness was subsequently cross-examined as to filling the hæmoglobin mixture into capsules, and he was still under cross-examination when the Court adjourned.

On Tuesday Mr. Parry was further cross-examined concerning the experiments he had made in September and October 1910. Eventually Mr. Salter asked whether Dr. Dixon, when consulting Mr. Parry in August, showed him correspondence which had passed between Dr. Dixon and Edinburgh, to which witness replied that he had not seen any correspondence until the commencement of this year, at all events, December 1911. Continuing, Mr. Parry said that Dr. Dixon had not told him that the defendants alleged that the mould was due to excess of water in the hæmoglobin. Nor did Dr. Dixon tell him that defendants had made various suggestions amongst which was one that Dr. Dixon should use hæmoglobin containing not more than 1 per cent. of water. If Dr. Dixon had told him that, witness would strongly have advised him to do nothing of the kind.

Mr. Salter: Before you made these experiments, eight or twelve to see if this stuff were mouldy, did you ascertain the amount of moisture in this composition?—Not at that time.

Before you threw the contents of the plates away the end of October did you see whether there were gain or loss of moisture as the result of your experiments?—No, sir.

Answering further questions, witness said that on his advice his father had given up the use of glucose in the making of capsules more than ten years ago. He had taken into account the action of a secret ingredient when considering the mould of these capsules. He knew, he added, of no ingredient whatever of any ordinary nature that was not suitable to go into a capsule when ground in oil and, when it was there, would have an effect on the capsule. The olive oil Dr. Dixon used was always standardised by a fixed percentage of oleic acid. Witness presumed that Dr. Dixon had adopted that course as a protective measure against other people who sought to imitate his product. Answering other questions, the witness said he quite accepted the statement that at an interview at which certain of the parties and their respective legal advisers were present Mr. Atkinson produced a large number of tins of capsuloids that were perfectly good and one tin of mouldy capsuloids. He might have observed to someone, "What is it that none of these have ever gone mouldy?"

Mr. Salter: Did you say to Dr. Dixon after examining a large number of good capsuloids, "They won't be able to say they can't make good capsuloids with your material?"—I think you must take it that I made that remark to the group.

With a few questions regarding hæmoglobin Mr. Parry's evidence was concluded.

Mr. Joseph William Ramsden, General Manager to Messrs. Bartlett Hooper & Co., capsule manufacturers, said he had seen the mouldy capsuloids, and was of opinion that their being insufficiently dried had caused their going mouldy. Witness added that he remembered making some capsules for Mr. E. J. Parry in July 1911, and saw that some of them were dried for three days, and another portion for about three weeks. They were all dried in the ordinary way by being put on a tray and exposed in a drying-room. He had discontinued the use of glucose in the manufacture of capsules about ten years ago on the advice of Mr. Parry, and since that time they had never had any mouldy capsules when they were properly dried. Witness thought 2s. 6d. per thousand a very cheap price for these capsules, and he would not have taken a contract for five million capsules at that price. Mr. Salter ascertained in cross-examination that the business of Bartlett Hooper & Co. belonged to Mr. Parry's father.

Evidence was given by Mrs. May Caroline Wilson,

formerly forewoman of the packing department of the plaintiff company. She related the *modus operandi* generally, speaking amongst other things as to precautions she said were observed to ensure cleanliness, etc.

WEDNESDAY'S EVIDENCE.

Further evidence was given on January 24 by Mrs. Wilson, and under cross-examination by Mr. Salter she said that on June 18, 1910, the whole of the stock she had was found to be mouldy, and none of it was to go out. Witness did not know what they did for stock unless they bought from wholesale houses. She added, however, that that stock did not amount to twenty gross of tubes on that occasion. She did not remember any mouldy capsules coming from Denoual or any other maker. She thought she would have remembered it if they had. No other makers supplied when Duncan, Flockhart & Co. began making in April 1909, and only their goods were sent out. Mouldy capsuloids began to be returned, she continued, as early as February 1910, and the returns increased. She kept no record of the returns.

Mr. Muir Mackenzie: Supposing a customer sent back capsuloids as unsaleable with a return slip?—I would exchange those capsuloids for fresh ones according to that slip. Answering another question, the witness said that occasionally they had a box of capsuloids from some other maker returned previous to April 1909, "but," she added, "nothing of importance."

A discussion arose between Mr. Salter and Mr. Mitchell James concerning the production of certain documents. "I want to show," the former remarked, "the large number of capsuloids that were returned before Duncan, Flockhart & Co. came on the scene."

Mr. John Murison, of Parke's Drug-stores, Ltd., stated that at a certain period (from 1907 to 1910) his company did a very large business with the plaintiff company. At the beginning of 1909 the sale of capsuloids was so large that he complained to some of their branch managers that he thought they were buying too much. He also did not think that at that time any capsuloids in their possession went mouldy—at all events there were no complaints from their various branches. Subsequent to that period complaints were received, branches sending the goods back. There was no sale for capsuloids now. He traced the beginning of that decline to about the autumn of 1910. At their branches they had sold other hamoglobin and oil capsules besides the plaintiffs'. These others had not had a tendency to go mouldy. They were packed in bottles or tubes. Witness added it was a very well-known article. Capsuloids had created the sale. In cross-examination he said that if the branches did return capsuloids the company's books would show it. If capsuloids were found to be in any way in a bad condition by a branch, the branch would send them back to the Capsuloid Co. direct. The hamoglobin and oil capsules, bought from various other makers and retailed at their thirty-five branches, contained no glucose. Witness had never had any of those capsules analysed.

Evidence was also given by Florence Patching, an assistant in the plaintiffs' workroom about the middle of July 1910, to the effect that she saw a consignment of capsuloids that were slightly mouldy.

Mr. Sidney E. Carter, receiving-clerk in the employ of Messrs. Mace & Haldane, who export, gave evidence as to the return of capsuloids during May and July 1910 and January and February 1911 from India, the West Indies, and South Africa. Some were decomposed and others covered with mould. They were returned to the Capsuloid Co., from whom they had been obtained. In cross-examination, he said he did not know when the goods had been obtained, as that did not concern his department.

Mr. John W. Wray, chemist, Wray Drug Co., Ltd., 85 High Holborn, described the trade in capsuloids as very fair up to two or three years ago, but now it had gone. He had still about two dozen tubes of capsuloids in stock, acquired from the plaintiff company in 1909. They were quite good.

Evidence was also given by Mr. David Dobney, chief assistant at the Holborn branch of the Taylor Drug Co., Ltd., and Mr. William Owen, capsule manufacturer, and

partner of the firm of Messrs. J. Tye & Son, of Packington Street, N. (with whom the plaintiff company entered into an agreement in September 1910 for one million capsules at 3s. 9d. per 1,000), and Mr. Edward Taylor, chemist, Market Lane, who produced a box of capsuloids said to have been returned from India, but admitted to Mr. Salter that he could not swear that these were the same as those sent out, although they looked the same.

This closed Wednesday's proceedings.

IMPORTANT APPEAL PENDING.

On Wednesday, January 24, Mr. F. E. Smith, K.C., mentioned to the King's Bench Divisional Court, consisting of Justices Hamilton and Lush, a case which, he said, was of considerable importance, and, having regard to its length, should have a date fixed for its discussion. The case was "*Scott v. Warr*," and arose from a dispute between two persons as to certain patents and the sale of medicines, as well as to the terms in which the business should be carried on. The matter would come before the Court on an appeal from a decision of Mr. Leslie Scott, K.C., sitting as an arbitrator, before whom the case occupied ten sittings, and a considerable amount of correspondence would have to be gone through. As the case would occupy their Lordships' attention for some time, he (counsel) suggested that February 1 next should be fixed as the date of the hearing. Their Lordships agreed to fix that date for the hearing.

Medical Acts.

FORTY YEARS' IMMUNITY.

At the Leeds Police Court, before Mr. Horace Marshall, Stipendiary Magistrate, on January 23, William Henry Gisburn-Bowell, Jocelyn House, Hunslet, near Leeds, was summonsed on five charges for holding himself out as a "surgeon" and practising as a medical practitioner. The Medical Defence Union prosecuted, and was represented by Mr. Arthur Willey, who said that for over thirty years defendant had pretended to practise as a fully-qualified medical practitioner at Hunslet. Outside Jocelyn House was a coloured lamp, while on the windows was the word "surgeon." It appeared that the discovery of the offences was due to the fact that in August last a young Navy telegraphist, on furlough, injured his knee, and the necessary medical certificate was furnished by the defendant, "Dr. Bowell." The authorities at Sheerness discovered that the name was not on the medical register, and as a result the young man obtaining the certificate lost his stripes and was fined 15s., though morally he was innocent. The Treasury were communicated with by the Admiralty, all the facts placed before them, after which the Medical Defence Union made inquiries into the circumstances in which the defendant had carried on his profession. It is extraordinary, remarked Mr. Willey, that members of the profession had not taken the trouble to see whether defendant's name was on the register. The defendant had acted for a local Lodge of the Sons of Temperance Friendly Society. In his surgery he had hung up his authority to act for the society, and there was also a certificate from the organisation, which read "Presented to Dr. Bowell, the surgeon of this Lodge."

Mr. Maud, for the defence, pleaded guilty. He said defendant first of all had a relative who was a fully-qualified surgeon. He was succeeded by defendant's uncle, and in 1859 defendant joined his uncle. Hoping to qualify, most of the work fell on his shoulders, and he carried on the practice until 1874, when his uncle died. That year a nephew succeeded to the practice, but defendant still continued to do most of the work. The nephew died in 1881, and since then defendant had been carrying on the work without any interference from the members of the medical profession, and now he was seventy-two years of age.

His Worship said it was a serious and important case, not only to the medical profession, but to the public, for human life might be endangered by an unqualified man practising as a surgeon. He could not forget the fact that the defendant ought to have been discovered years ago, but nothing had been done until the communication came from the Admiralty. He imposed a fine of 10l. in one case only.

BANKRUPTCY REPORT.

Re Fredk. Wm. Michael, Shaftesbury Avenue, W.C. Chemist, trading as "F. Williams & Son."—An application for an order of discharge was made by this bankrupt on January 19 to Mr. Registrar Brougham at the London Bankruptcy Court. Mr. G. W. Chapman, Official Receiver, reported on the circumstances of the case, which were fully reported in the *C. & D.* (last volume, pp. 438 and 637). The debtor is a registered medical practitioner who carried on a chemist's shop at the above address. The provable debts amounted to 1,153*l.* 15*s.* 1*d.*; the assets had so far produced 47*l.* 3*s.* 8*d.*, and a further 5*l.* was anticipated. As offences the Official Receiver reported (1) insufficiency of assets to equal 10*s.* in the pound on the amount of the unsecured liabilities; (2) omission to keep proper books of account; and (3) a previous arrangement with creditors. Mr. W. G. Kent also addressed the Court for the bankrupt, stating that he had employed fifteen managers within eighteen months, and he estimated his loss by their dishonesty at 250*l.* His Honour granted an order of discharge, subject to a suspension of two years.

DEEDS OF ARRANGEMENT.

Silvester, Henry Thomas, 76 King Street, Knutsford, Cheshire, Chemist.—Trustee, P. S. Booth, 35 Exchange Chambers, 2 Bixteth Street, Liverpool. Dated, January 17: filed, January 22. Secured creditors, 4,200*l.*; liabilities unsecured, 2,492*l.*; estimated net assets, 225*l.* The creditors include W. Horrocks, Knutsford (10*l.*); Evans Sons Lescher & Webb, Ltd., Liverpool (624*l.*); Jewsbury & Brown, Manchester (10*l.*); Camwal, Ltd., Manchester (11*l.*).

Elliott, John Johnson, 4 King Edward's Buildings, Bury Old Road, Cheetham Hill, Manchester, Chemist and Druggist.—Trustee, H. L. Price, 15 Fountain Street, Manchester. Dated, January 15; filed, January 22. Liabilities unsecured, 1,080*l.*; estimated net assets, 500*l.* The creditors include The British Drug Houses, Ltd. (14*l.*); D. & W. Gibbs, Ltd. (11*l.*); S. Maw, Son & Sons (10*l.*); James Woolley, Sons & Co., Ltd., Manchester (154*l.*); Oldfield, Pattinson & Co., Manchester (24*l.*); Yardley & Co., Stratford (11*l.*).

GAZETTE.

Partnerships Dissolved.

FISHER, S., and FISHER, S. B., Birchfield Road, Aston Manor, Birmingham, surgeon dentists, under the style of S. & S. B. Fisher.

HART, H. L., and BLACKITH, B., Park Place Villas, Maida Hill, London, electro-therapeutic establishment proprietors, under the style of Electro-Therapeutic Institute.

SIMPSON, G. W., and ASHTON, J., Wandsworth, medical practitioners, under the style of Simpson & Ashton.

The Bankruptcy Acts, 1883 and 1890.

RECEIVING ORDER.

PEET, J. H., Worplesdon, physician and surgeon.

LIMITED COMPANIES.

New Companies Registered.

The letters P.C. mean Private Company within the meaning of the Companies Act, 1907, and R.O., Registered Office.

R. G. SCOTLAND & Co., LTD. (P.C.)—Registered in Edinburgh. Capital 1,000*l.*, in 1*l.* shares. Objects: To carry on business as makers of artificial limbs, trusses, etc. R.O., 58 Renfield Street, Glasgow.

LAWRENCE E. PALMER Co., LTD. (P.C.)—Capital 500*l.*, in 1*l.* shares. Objects: To take over the manufacture and sale of the galvanic appliance for the treatment of deafness and allied disorders known as "Electrics" from L. E. Palmer, together with the specification for the manufacture thereof. R.O., Holborn Hall, W.C.

SANITARY COLOURED WOOD-DUST Co., LTD. (P.C.)—Capital 600*l.*, in 1*l.* shares. Objects: To carry on the business of manufacturers of sanitary coloured wood-dust, disinfectants, dyes, carpet-cleaners, and fire-lighters, etc., and to adopt an agreement with F. C. Howard and C. A. Talbott, who with Mrs. F. C. M. Gates are the first directors.

JEWELLS, LTD. (P.C.)—Capital 300*l.*, in 1*l.* shares. Objects: To carry on the business of manufacturing, wholesale and retail, pharmaceutical and analytical chemists and druggists, dispensers, drysalts, etc. The first directors are Mrs. B. F. Corkill, 95 Newsham Drive, Liverpool, and A. F. Jewell, 95 Newsham Drive, Liverpool, chemist.

RENDALENE, LTD. (P.C.)—Capital 300*l.*, in 1*l.* shares. Objects: To acquire from Sanalak, Ltd., the use and benefit in a certain secret remedy or prescription known as "Rendalene," for the treatment and cure of obesity, corpulence, and kindred ailments, together with benefit of all prescriptions, formulae, and directions for the manufacture thereof. W. Farr is the first director. R.O., 15-19 Vine Street, Clerkenwell, E.C.

Company News.

MAXSOL, LTD.—A notice of the appointment of H. M. Branford, 3 Broad Street Buildings, E.C., as receiver, on January 15, 1912, has been filed at Somerset House.

KIRKS DRUG-STORES, LTD.—A notice of the appointment of W. Blakey, 23 Pilgrim Street, Newcastle-on-Tyne, as receiver and manager, on January 10, 1912, has been filed at Somerset House.

PARKE'S DRUG-STORES, LTD.—At the annual general meeting held at 65 Harwood Street, London, N.W., on January 18, the Chairman (Mr. P. Warnford-Davis), in moving the adoption of the report and accounts (*C. & D.*, January 13, index folio 43), said that the business is in a sounder position than a year ago. The net profits were several hundreds of pounds more, while the company's indebtedness is 3,059*l.* less. The sale of the lease of the Lewisham premises resulted in a paper loss of 163*l.*, instead of a profit as had been stated.

CEREBOS, LTD.—The report for the year ended November 30 last states that the net profit for the year amounts to 22,393*l.* (as compared with 22,626*l.* in the previous year), making with amount brought forward a total available of 25,276*l.* The directors recommend a dividend at the rate of 6 per cent. per annum, free of income-tax, that 1,000*l.* be written off freehold and leasehold property, that 1,000*l.* be set aside as a provision for income-tax, and that 8,874*l.* be carried forward. The recent fire at the company's works will cause considerable inconvenience in working for several months, but large temporary works have been secured at West Hartlepool, while the new works at Greatham were not damaged. It is stated that the company is substantially insured against fire and loss of profits arising therefrom.

Charges or Mortgages.

Under the Companies (Consolidation) Act, 1908, Section 93, the mortgages or charges therein specified are (except in Scotland) void against the liquidator and any creditor of the company unless filed with the Registrar in accordance with the conditions laid down in the Act.

Full statutory particulars of the following have been filed at Somerset House, London, W.C.

Cardiff Alkali Co., Ltd.—Memoranda of satisfaction (a) to the extent of 100*l.* on June 30, 1911, of debentures dated February 26, 1909, securing 500*l.*; (b) to the extent of 50*l.* on June 13, and similar amount on December 31, 1911, of debentures dated September 12, 1905, securing 500*l.*; (c) to the extent of 50*l.* on March 30, and a similar amount on July 2, 1909, of debentures dated March 12, 1907, securing 250*l.*; and (d) to the extent of 50*l.* on March 12, 1910, of debentures dated July 29, 1898, securing 1,000*l.*, have been filed.

Dearborn, Ltd.—Particulars of 2,000*l.* debentures created January 9, 1912, the amount of the present issue being 50*l.* Property charged: the company's undertaking and property, present and future, including uncalled capital. No trustees.

TOILET-POWDER CANS, which were formerly made of tinplate, are now almost invariably produced from brass and copper lightly plated with nickel. A single manufacturer of talcum powder alone used more than six million such cans for that product in 1906, says a leading authority on copper.

GERMAN CHEMICAL INDUSTRY.—In the course of a British consular report on the trade of Bavaria it is stated that the 1910 campaign of the Bavarian chemical industry was extremely good all round, but that exports to foreign countries have decreased on account of the high tariffs now generally in force. Bitter resentment is expressed in some reports of Bavarian Chambers of Commerce for 1910 against the keen and, as it is called, "over-bearing" competition from North German chemical-works. Over-production of drugs, and consequent under-selling in this branch, is also complained of in these reports.

BIRTH.

SMITH.—At Haining View, Selkirk, on January 16, the wife of Thomas Mathie Smith, chemist and druggist, a son.

DEATHS.

ALEXANDER.—At 42 Albany Street, Leith, on January 18, Janet (Jessie) Halley, the wife of Mr. W. G. Alexander, retired chemist and druggist.

CAPPER.—At his residence, Huyton Park, Huyton, on January 21, Mr. Samuel James Capper, late of Thompson & Capper, manufacturing chemists, Liverpool, aged eighty-six. Mr. Capper was for many years a partner in Messrs. Thompson & Capper, manufacturing chemists, College Lane, Liverpool, which was founded about 1798 by Mr. Thomas Thompson, under the style of Thomas Thompson & Son. Mr. Capper was apprenticed to this firm, and in 1843 was taken into partnership by Mr. George Thompson, the son of the founder, and the style of the firm was altered to Thompson & Capper. The late Mr. I. C. Thompson was the next partner, grandson of the founder; and the present sole surviving partner is Mr. Edwin Thompson, a great-grandson of the founder, who has had the sole management of the business for some time. Mr. Capper had been in failing health for a long time, and many years ago ceased to take an active part in the business, though he continued his association with it as a sleeping partner. He was born of Quaker parents, whose pedigree dates back to 1590 with an unbroken connection with the Society of Friends, but he himself was identified with the Congregationalists of Huyton, near Liverpool, where he resided, and for many years he served as deacon and treasurer. He was educated at a Friends' School at Epping. In 1850, when the Homeopathic Association was formed, Mr. Capper became its honorary secretary. As a student of natural history all through a busy career his leisure hours were occupied with the study of insect life. In 1877 he was one of the founders of the Lancashire and Cheshire Entomological Society, and was elected the first president. During his life Mr. Capper had collected a comprehensive and valuable collection of the butterflies and moths of Great Britain. He was for many years a Fellow of the Linnean Society.



Mr. S. J. CAPPER.

Freeman.—On January 9, Mr. Frederick Freeman, chemist and druggist, 20 Loveday Road, West Ealing, aged sixty-three. Mr. Freeman had been head dispenser at the General Post Office dispensary, Fitchetts Court, St. Martins-le-Grand, since 1878. On the day of his death he went to his duties, but died from heart disease two hours after his return home. Mr. Freeman passed the Modified examination in 1872.

HARTILL.—On January 10, Mr. Ambrose Hartill, chemist and druggist, 41 Wolverhampton Road, Heathtown, Wolverhampton, aged fifty-seven.

HOWARD.—On January 12, Mr. William Howard, chemist and druggist, 78 Red Bank, Manchester, aged sixty-five.

SCREATON.—On January 2, Mr. John Joseph Screaton, chemist and druggist, Market Place, Bungay, Suffolk, aged seventy-six.

STACK.—At Listowel, co. Kerry, last week, Mr. Gerald Leahy Stack, Ph.C. Mr. Stack was registered in 1883, and was highly respected in the neighbourhood. The

Listowel Petty Sessions Court on January 20 adjourned as a mark of respect to deceased's memory.

TEED.—At Harwich, on January 16, Lieutenant Robert Lindsay Teed, R.N., of H.M.S. *Amazon*, aged twenty-seven. Mr. Teed, who was the elder son of Dr. F. L. Teed, F.I.C., public analyst, was accidentally drowned.

BUSINESS CHANGES.

Notes for this section sent to the Editor should be authenticated, and must not be in the nature of advertisements.

MR. D. DAWSON, chemist and druggist, 80 King William Street, Blackburn, who succeeded Mr. A. P. Garland in this old-established business, is removing lower down in the same thoroughfare.

MR. T. R. OLDBURY, chemist and druggist, late of Waterloo, Liverpool, has purchased the business at Swanley, Kent, of Mr. Frank Cox, chemist and druggist, who has left England for Australia.

PERSONALITIES.

Notes for this section sent to the Editor should be authenticated, and must not be in the nature of advertisements.

MR. W. HONEYMAN, Ph.C., has passed the Intermediate examination of the Institute of Chemistry.

MR. A. E. HOBBS, Ph.C., has been elected junior Vice-President of the Tunbridge Wells Tradesmen's Association.

MR. T. SMITH, the new President of the Hull and District Pharmacists' Association, has been in business in Osborne Street, Hull, since August 1895, when he acquired the pharmacy from Mr. J. Dunlop.

MR. E. D. JONES, chemist and druggist, Medical Hall, Llangollen, has been appointed general secretary of the Wrexham National Eisteddfod which is to be held this year. In 1908 Mr. Jones was complimented upon his organisation of the National Eisteddfod at Llangollen, which he carried to a successful financial issue.

MR. THOS. JACKSON FOGGITT, chemist and druggist, of Stoneybrough, and Market Place, Thirsk, was returned unopposed on January 22 to fill a casual vacancy on the North Riding of Yorks County Council. Mr. Foggitt has been Vice-Chairman of the Thirsk Parish Council for fourteen years.

MR. F. G. C. WALKER, Ph.C., has passed the Final examination for the Associateship of the Institute of Chemistry in the branch of food and drugs, etc. Mr. Walker was a Bell scholar, and has for several years been chief analyst to the Health Department of the Shanghai Municipal Council. Mr. Walker has spent part of his holiday leave in taking the Institute's examinations.

TRADE-MARKS.

Objections to the registration of any of the undermentioned applications must be stated on Form T.M. No. 7 (obtainable at Money Order Offices for £1) and lodged with Mr. Temple Franks, Comptroller-General, Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned.

The figures in parentheses refer to the classes in which the marks are desired.

(From the "Trade-marks Journal," January 17, 1912.)

"PHOSINE": for mineral and aerated waters (44). By G. Green, 22 Dial Street, Leeds. 338,393.

"BUTTERFLY" and picture of same, for soap (47); "HAND-PRINT" and picture of hand, for candles, laundry preparations, etc. (47), for perfumery, etc. (48). By J. Crossfield & Sons, Ltd., Bank Quay, Warrington. 335,391, 338,379, 338,380.

"NECREMOLINE": for perfumery, etc. (48). By C. Harrison, 23 Putney Market, Putney, S.W. 338,324.

"ZAR-MAR": for all goods (48). By E. Sly, 2 Lacey Street, Bow, E. 338,343.

CIRCULARS & PRICE LISTS

IN THIS
WINTER ISSUE

THE issuing of insets in THE CHEMIST AND DRUGGIST is a method of advertising which is available twice a year, the present Winter Issue being one of these occasions. In looking through the circulars and price-lists which are sent for insertion in this number we are led to wonder whether finality has been reached. The same idea has occurred to us before, but each time the enterprise of the producers seems to outdo previous efforts. Looking at the collection of insets from the typographical standpoint we claim that there will be found some of the finest work that has ever been produced in this connection. The colour-work has reached a high level. The variety of subjects dealt with also strikes those who regard the insets from a different point of view. They are all satisfying. By their aid a man might start training his mind to enable him to pass his examinations and imbue himself with the properties which make for success. Then he could call in the shopfitter to prepare his pharmacy, the printer to supply him with labels, price-lists, and advertising-matter, the bottle-maker to satisfy his many requirements for glassware, and the engineer to instal the pharmaceutical machinery for his laboratory. He will find a choice of drug-houses, including a manufacturer of fine chemicals, and special houses for essential oils, capsules, and pills, also druggists' sundriesmen and firms that specialise in papers and flesh-gloves. Soaps and perfumes are catered for in an exceptional manner, and counter-specialties can be bought ready put up along with branded hair-dye, asthma-cure, and vaseline. Should he decide to make his own aerated waters, there are offered the necessary soluble essences and bicarbonate. The optical sideline is represented, and should he obtain a wine-licence his needs are catered for. Lastly, to make his windows pay there are firms who offer inducements of an attractive nature for window-displays. To have gathered together such a diverse display in an increased number, and in addition to the ordinary advertisements, is an accomplishment which we are sure will be appreciated by the drug-trade, and we trust will lead to closer business relations between wholesaler and retailer. As a means of recording the contents of the insets we have given, in alphabetical order, a *résumé* of the matters dealt with, and we are not without hope that buyers will find this a useful preliminary to a study of the insets themselves. The figures which follow the monographs denote the position of the insets among the advertisements. The publisher desires us to state that the next occasion upon which insets will be received for distribution with THE CHEMIST AND DRUGGIST is in the Summer Issue, which is to be published on July 27. Intending advertisers can obtain printed particulars of the conditions upon which insets are taken, and are also at liberty to avail themselves of the resources of the advertising department in drawing up suitable announcements.

Allen & Hanburys, Ltd., Plough Court, London, E.C., insert in each copy of this issue a copy of an inset devoted to details of attractively packed drugs. In sequence the pages are dedicated to malt and oil, cough-remedies, cod-liver oil, chemical food, malt extract, and toilet-preparations, full details being given of the sizes and prices of the packages. Fine specimens of the typographical art, in the shape of half-tone blocks, are placed at the head of each page, and convey to the reader an idea of the style second only to that given by the actual package. A feature which should be made a note of is the fact that a distinct style of label can be reserved for every pharmacist in each locality, this removing the only possible objection which can be urged against factory-packed drugs and toilet-preparations. Incidentally this emphasises the perfection which the organisation has reached and the variety of labels available. (Inserted loose.)

H. Bronnley & Co., Ltd., Acton Vale, London, W., give particulars in a tastefully designed inset of their leading lines in perfumes and soaps. The premier place is accorded to "the newest of new perfumes"—Courvoisier's Omar Khayyam, which sells under P.A.T.A. protected prices at 2s. 9d., 5s., and 11s. 6d. per bottle. The other perfumes dealt with are Viotto, Havanita, and the non-spirituous "C.C." perfumes. The toilet-soaps are Viotto, Havanita, Mitcham lavender, and Albu-myl verbenä. Mimosa for the hands and Unical head Cologne should also be noted. (Pp. 32 and 33.)

Brunner, Mond & Co., Ltd., Northwich, devote an inset to mineral-water bicarbonate. Time was when the maker of aerated waters had not a soul above whiting and oil of vitriol, but the modern practice of employing sodium bicarbonate has effected a complete revolution in the trade. The instructions given for using bicarbonate for the evolution of carbonic-acid gas show the advantages of this method. (Pp. 64 and 65.)

Butler & Tanner, The Selwood Printing Works, Frome, who specialise in commercial printing, issue a striking inset, which certainly bears the imprint of enterprising originality. The importance to business of advertising is second only to the necessity of having announcements to the public printed in a manner which fixes the attention. The offer to send samples is one of which our readers should take advantage. (Pp. 64 and 65.)

The Chesebrough Manufacturing Co., 42 Holborn Viaduct, London, E.C., give as an inset a facsimile of a showcard which they issue to advertise the fact that "Vaseline hair-*tonic* lets the hair grow." The prices of the various packages of vaseline and its preparation are given on the back page, and a reminder that the word "vaseline" is a registered trade mark. Readers will notice that this inset is adapted for use as a showcard and can be detached for that purpose. (Pp. 32 and 33.)

Robert Ferber & Co., capsule-manufacturers, 191-195 Southwark Bridge Road, London, S.E., give in each copy of this issue their price-list of soluble gelatin capsules, perles, medicated suppositories, pessaries, bougies, and horse-balls under the Hebe trade-mark. It is probably the most complete list of its kind that has been published, and it is astonishing to note the great variety in which capsuled drugs are offered. An interesting point is that this elegant form of administering medicines is not confined in its scope to human beings, dog and poultry capsules occupying sections of the list. A newer development is the method of packing ointments in capsules, a form which possesses several distinct advantages—the ointments are kept from the air, thus retaining their freshness and activity, and for travellers the capsuled ointments are ideal in cases where pots or even metal tubes are inadmissible. Some specialties dealt with in the list are Apolax globules, Blenosan capsules, ceroids, Pepozan-digestive globules, and Dr. Harvey's "Blood-in-order" capsules. The business is a good example of the advantages of intelligent specialising in pharmacy, in which we feel sure wholesaler, retailer, and the public share. (Inserted loose.)

B. W. Hair & Son, 90 and 91 High Holborn, London, insert a circular which gives particulars of Dr. Hair's preparations. Sir Morell Mackenzie's portrait will be noticed, that celebrated physician having endorsed the value of Dr. Hair's asthma-cure. He stated on one occasion that he knew many people benefited by this remedy. Bronchial and catarrh remedies and liver-pills are other products of this firm. The wholesale prices and list of depôts and agencies are given. (Pp. 32 and 33.)

C. R. Harker, Stagg & Morgan, Ltd., wholesale druggists, Devon Wharf, Emmott Street, Mile End, London, E., have an inset mainly devoted to the "Golden Horse-shoe" brand goods associated with the title "Laurence." The chief gem in the basket is the series of hair-dyes. The sale of these now reaches an enormous quantity, which proves eloquently that the dyes fulfil in a satisfactory manner the purpose for which they were designed. There is a special bonus scheme in connection with Laurence's hair-dyes, the terms of which are set out on the circular. (Foreign copies only.)

C. J. Hewlett & Son, Ltd., Charlotte Street, London, E.C., reprint under the title "Progress" the account of a visit to their premises which appeared in the last Summer Issue of THE CHEMIST AND DRUGGIST. This gives an independent view of the fine establishment which has grown up in Charlotte Street and Curtain Road, about which customers are naturally interested. (Pp. 136 and 137.)

R. A. Lister & Co., Ltd., Dursley, direct attention in their inset to the pistonless hydraulic press which has been adopted as the best by numerous firms connected with the drug-trade. The particulars given will be read with interest by practising pharmacists, who may be further advised to write for the illustrated booklet which is offered in the circular. (Pp. 64 and 65.)

McKesson & Robbins, manufacturing chemists, New York (London agents, S. Maw, Son & Sons, 7-12 Aldersgate Street, London, E.C.), have an inset wherein particulars are given of the ovoid capsuled "McK. & R." pills. The coating is gelatin, at once the most readily soluble and most brilliant of pill-coverings. In conjunction with the ovoid shape, these pills have a distinctive appearance which connotes the care expended in their manufacture. The selection of formulae shows that there is sufficient variety to satisfy all the requirements of the modern prescriber. The Calox tooth-powder, for which the British depôt is G. B. Kent & Sons, Ltd., 75 Farringdon Road, London, E.C., is advertised on the back page of the inset. The juxtaposition of reprinted recipes for dentifrices from Salmon's Pharmacopœia Bateana of 1693 is a pleasant contrast of the old with the modern oxygen tooth-powder. (Pp. 136 and 137.)

May, Roberts & Co., Ltd., druggists' sundriesmen, 7, 9, and 11 Clerkenwell Road, London, E.C., in their inset invite chemists to send for the 1912 edition of their illustrated price-list. For this purpose a part of the page is perforated, and can be employed as a postcard. Our readers should make a point of filling up this card. As is well known, the company does not employ commercial travellers, but this has not militated against the success of the business, which in 1911 reached a turnover never before attained. (Pp. 32 and 33, except Australia.)

E. Merck, Darmstadt (London office, 16 Jewry Street, E.C.), makes veronal and veronal sodium the features of his inset. There are shown in facsimile the various packages in which these synthetic soporifics are supplied. Mention is also made in the inset of fibrolysin, iodipin, perhydrol, and stypticin, and other groups of fine chemicals for which the house is famed. (Pp. 136 and 137.)

"Mikado" Toilet-paper.—The proprietors of this British-made article insert a sheet of the actual paper so that our subscribers can judge of the special physical properties upon which its claims of superiority are based. The "Mikado" toilet-paper is put up in packets and rolls, which retail at 6d. each, and the price is protected by the P.A.T.A. scheme. A list is given of the wholesale houses from whom supplies are obtainable. (Pp. 168 and 169, except Australia.)

A. & F. Pears, Ltd., 71-75 New Oxford Street, London, W.C.—The brilliancy and beauty of mediæval illuminated manuscript is recalled by the Pears inset. The front bears reproductions in correct colours of the arms of the Royal Houses to whom the company are soapmakers "by appointment," the purple setting and laurel wreath forming a very appropriate complement. The terms upon which Pears' soap are supplied—5% orders receive the maximum discount—are set out on the back, and it is well to reiterate the statement that "no dealer in the Kingdom for any quantity whatever, obtains more than the above 20 per cent. discount." (Pp. 32 and 33.)

The Pelman School of the Mind, 55 Wenham House, Eloomsbury Street, London, W.C., place at the head of their inset the attractive inscription, "To double your brain's earning-power." The matter that follows is of an interesting nature, apart from the money motive which is so frankly admitted to be the reason for cultivating the faculty of memory. It will be noticed that an offer is made to send a copy of the Pelman Magazine with par-

ticulars of a complete course at specially reduced fees. The coupon should certainly be filled in. (Pp. 168 and 169.)

O. A. Pfeifer, bottle-maker, 69 Farringdon Road, London, E.C., gives in a yellow inset some idea of the various kinds of bottles which he manufactures. Both machine and hand blowing are employed, so that the range of glass bottles and jars is very extensive. The business is not confined to large orders, as although bottles are made to order arrangements can generally be made for the supply of smaller lots. (Pp. 136 and 137.)

The Postlip Mills give as an inset samples of their British-made filter-papers, attached to a sheet of seidlitz blue. As is well known, the manufacture of seidlitz blue which remains fast to acids is one of the most difficult problems the paper-maker has to face, but after testing this sample it will be seen that the problem has been successfully mastered at the Postlip Mills. The papers are obtainable from dealers in druggists' sundries. (Pp. 168 and 169, except Australia.)

Potter & Clarke, Ltd., wholesale druggists, 60-64 Artillery Lane, London, E., insert their price-list of packed goods and specialities. The design of the cover of the list is novel and striking; while the whole list, which runs to sixty pages, is worth a careful study. Turning over the pages one notes first of all the assortment of cachous and special lozenges. The cachous are offered in both bulk and packed form, and the lozenges include such good sellers as "Five Barks" and "All Fours" jubes, raspberry and sulphur creams, linseed, liquorice and chlorodyne lozenges, Brompton Hospital lung-lozenges, and sulphur tablets. Next follow asthma specialities, beginning with Potter's Asthma-cure and the patent inhaler, cough-mixtures, cachets, and capsules, corn-cures, emulsions, malt extracts, feeding-bottles, toilet-preparations, "Winged Lion," medicinal herbs, sweet herbs, insect-powder, Kasbair Kidney-cure, lemonade crystals, "Ye Olde London" marking-ink, "Peerless" nit-ointment, Abbott's green peppermint, Arnaud et Cie.'s perfumes, plasters, packed pills, sachets, salines, shampoo-powders, soaps, tablets, tooth-powders, and medicated wines. We have only mentioned some of the leading lines, but there are many other items which embody good ideas in placing domestic remedies or household requisites before the public. In packing these goods care has been taken to avoid increasing unduly the cost. The great middle-class public has been specially kept in view. It will be noted that this list deals only with the packed drugs and specialities, other lists being published covering other spheres of the company's activities. (Inserted loose.)

Rudduck & Co., shop-fitters, 262 Old Street, London, E.C., will interest most of our readers in their pink inset. Those commencing business, or contemplating re-fitting or the purchase of a new piece of shop-furniture, will find the particulars of sizes and prices useful. The inside of the circular gives an illustration and the complete specification of a 75% shop, the one contemplated being 17 by 15 ft. (Pp. 168 and 169.)

The Société des Lunetiers, wholesale manufacturing opticians, 56 Hatton Garden, London, E.C., enclose an inset which gives on the front page an illustration of a prism binocular specially adapted for the Colonies. The society make these binoculars in four series and of six different powers. It will also be noted that a new series of catalogues is ready, the four parts dealing with different sections of the trade of the optician. (Foreign and Colonial copies only.)

Solport Bros., 188 and 190 Goswell Road, London, E.C., insert a revised list of George Pattison's bath gloves and straps, the manufacture of which has recently been taken over by Messrs. Solport. Some of the designs of the bath-gloves are shown and priced, while original patterns in lung and chest protectors are useful for the purpose of ordering these goods. Henry Young's arnicated corn and bunion plasters, which were first put on the market sixty-six years ago, are also included in this inset. (Pp. 168 and 169.)

Stevenson & Howell, Ltd., manufacturers of soluble essences, Southwark, London, S.E., tell in their inset the

secret of perfect aerated waters—the use of “Red Ball” brand essences. It is claimed that the “Red Ball” soluble essences are of the highest degree of concentration, and this, combined with the fact that the flavours are true, ensures the production of the best waters at moderate rates—a goal which all manufacturers strive to attain. Buyers will also read with interest the steps which are taken to secure the supply of pure essential oils. This is ensured by means of a scheme of analytical control by which samples can be submitted for analysis, at the company's expense, to Mr. E. J. Parry, the essential-oil expert. (Pp. 64 and 65.)

F. J. Stokes Machine Co., whose sole agents are Thompson & Capper, Manesty Buildings, College Lane, Liverpool, have an inset dealing with some useful pieces of pharmaceutical machinery. The very full particulars given of the machines enable our subscribers to judge of the advantages claimed for the apparatus. In this way are dealt with the “Eureka” “N,” “O,” “H,” and the Clark rotary tablet-machines. A selection is also given of other useful pieces of apparatus which will interest chemists in a large way of business and those who specialise in particular directions. These apparatus are employed in mixing, granulating, grinding, coating, and distilling. The reasons why Stokes machines are preferred are cogently stated on the second page of the inset. (Pp. 64 and 65.)

Sutley & Silverlock, Ltd., label printers Blackfriars Road, London, S.E., make their inset noticeable as a fine specimen of colour-printing. The inference which most chemists will draw is that this company have at hand the means of producing showcards, cartoons, and similar work of the highest class. As label-printers they are well known in pharmacy, that department having a record which extends back for seventy years or so. (Pp. 136 and 137.)

Wilkes & Co., Ltd., printers, 41-47 Friar Street, Southwark, London, S.E., offer their services in the production of catalogues and high-class advertising-matter. The miniature reproductions of printing emanating from the Wilkes Press, given on the front of the inset, are sufficient indication of the variety and originality of the ideas which may be tapped by advertisers who place themselves in communications with this house. (Pp. 32 and 33.)

Winox, Ltd., 65 London Wall, London, E.C., in an inset bring to the notice of chemists a beef-and-malt wine under the happily coined name “Winox.” A facsimile is given of the Winox label, and the product, which yields 33 per cent. to the retailer, sells at 1s. 8d. and 2s. 6d. the bottle. The wine used as a medium is of the sound character so necessary in preparations that are employed as tonics and restoratives for invalids. The company make an offer to supply advertising-matter, which chemists who hold wine-licences should investigate. (Pp. 64 and 65.)

Wright, Layman & Umney, Ltd., Southwark, London, S.E., devote an inset to Wright's coal-tar soap, liquor carbonis detergens, and other coal-tar specialities. Most chemists will read with interest the account of the origin and progress of these preparations and the exceptional treatment accorded to the liquor carbonis detergens in the standard text-books on diseases of the skin. The formulæ given form a useful summary of the medical uses of liquor carbonis detergens. Features of the inset are the details of the window-display competitions. The prize-list in the 1911 competition is published, together with illustrations of the window-displays made by the winners of the first four prizes. The opportunity is taken to announce the conditions of the competition which will be held during the present year, in which again are offered fourteen prizes of the aggregate value of 657, in addition to the bonus of Wright's coal-tar soap given with orders of a certain value. The display-material includes a new showcard, in which the motif “The (W)right sort of Tar” is carried out in a manner which we think will appeal to the public. (Pp. 32 and 33.)

MASTICH.—The exports from the island of Scio during 1910 amounted in value to 45,000*l.* Austria-Hungary, France, Egypt, and the United Kingdom were the chief importers.

TRADE NOTES.

THE “IDEAL” bed and douch slipper is illustrated and described in our advertisement pages. It is stocked by sundries houses.

THE YOST TYPEWRITER CO., LTD., 50 Holborn Viaduct, London, E.C., invite chemists to apply for a booklet dealing with a chemists' publicity scheme.

KRÜSCHEN SALTS are exceptionally well advertised to the public by Mr. E. Griffiths Hughes, 17 Deansgate, Manchester, and chemists should not miss the results in profit.

HOOPER'S MARKING-INK is an old favourite, and well tried as to its stability. The manufacturers' dépôt is now Messrs. W. Hooper & Co., Letchworth, Herts, the Garden City.

“VALIDOL SHOWS” are now being arranged by chemists throughout the country. Messrs. Widenmann, Broicher & Co., 33 Lime Street, London, E.C., will furnish all particulars with regard to them.

THAT HISTORIC PHRASE “Wait and See” is now applied to pills, which yield 50 per cent. protected profit. They are made by the Wait-and-See Proprietary, 13 and 14 Abchurch Lane, London, E.C.

THREE LEADING LINES with Messrs. Southall Bros. & Barclay, Limited, Birmingham, are cod-liver oil emulsion, sanitary specialities, and “Vitafer.” They tell the trade something about them in this Winter Issue.

POUDRE DE RIZ.—This is a leading line of Messrs. Dubois & Co., Station Buildings, Haggerston, London, N.E., who in their advertisement in this issue offer to send on application a full list of the goods they manufacture.

“TRUFRUIT” FLAVOURING EXTRACTS are the subject of an artistic little pamphlet which is issued by the manufacturers, Messrs. A. Boake Roberts & Co., Ltd., Stratford, London, E. Their distinguishing feature is the quite natural fruit flavour.

CHEWING-GUMS.—Messrs. Samuel Allen, Ltd., 126 City Road, London, E.C., are sole agents in Great Britain for the various kinds of chewing-gum manufactured by the National Chiclé Co., Toronto. Special varieties are “Cherry-ripe,” pepsin, and peppermint.

MESSRS. WARD & GOLDSTONE, electrical engineers, Manchester, whose goods for chemists' sale have occasionally been referred to in the *C. & D.*, inform us that they have established new branches in Cardiff and Glasgow, whence supplies may be obtained by customers.

THE JEVES' SANITARY COMPOUNDS CO. (LTD.), 64 Cannon Street, London, E.C., have appointed Dr. E. Klein, F.R.S., as scientific adviser to the company. The coefficient values, by the Rideal-Walker test, of all the company's disinfectants are tested and certified before leaving the works.

“P.C.L. QUARTERLY.”—This is the title of a quarterly journal issued by Messrs. C. J. Plueknett & Co., Ltd., 29 and 30 Poland Street, London, W. The idea of the publication is to give practical hints on dental matters, and to place before dental operators the newest pieces of apparatus in a constantly progressive direction.

GAS-LIGHTING.—We noted the fact last week that Pifco, Ltd., 29 Thomas Street, Manchester, were offering some special lines in lamps at reduced prices for outside lighting of shops. The company make a special feature of incandescent gas-lighting, and publish a comprehensive catalogue which is supplied to chemists on application.

OIL-GAS APPARATUS.—Messrs. Mansfield & Sons, Ltd., 12 Hamilton Square, Birkenhead, have issued a list regarding their oil-gas apparatus for the use of scientists whose laboratories are isolated from a supply of coal-gas. There are various types of these apparatus, and in some of these temperatures as high as 1,500° C. can be obtained.

PACKING FACILITIES.—Messrs. Prichard & Constance (Wholesale), Ltd., 71 Newman Street, London, W., announce their willingness to pack special lines for chemists without any stipulations as to quantity. Since the intro-

duction of the Amami perfumery the returns of the company have increased 3,000l., which is the proof of success.

"STERILLA" LIQUID SOAP.—This is a special variety of liquid soap prepared for surgical use and for employment in other cases where a combination of a cleansing agent and disinfectant is desired. It is made by Messrs. Harold E. Matthews & Co., Clifton, Bristol, and sells at the protected prices of 1s. and 2s. 6d. per bottle, and 1s. 3d. in metal flasks. It is also obtainable in bulk. The London depôt is Messrs. F. Newbery & Sons, Ltd., 27 Charterhouse Square, E.C.

PHOTOGRAPHIC PAPERS.—We have had inquiries for supplies of unbranded photographic papers and postcards, and therefore call attention to the advertisement in this issue of Rajar, Ltd., Mobberley, Cheshire. The company make a speciality of supplying chemists with these goods, packed under their own name or any label desired. The quality of the papers is stated to be unequalled—a very necessary factor where the chemist is accepting responsibility for the goods he sells.

NEW "DOOMO" WORKS.—Messrs. Jno. H. Smith & Co., proprietors of the "Flydooomo" fly-paper and of the "Doomo Air Ship" fly-band, Newark-on-Trent, have secured larger and more convenient premises for the manufacture of these specialities. At the new works there is room for at least double the number of hands. The works are situated on the outskirts of the town, but handy for both rail and post, so that the firm hope to maintain fully their reputation for promptness in the dispatch of orders.

"ZOG IT OFF" has become a phrase familiar in most households. Zog is a soft white paste the application of which in small quantity to paint or other surfaces common in households removes stains or dirt. It does this well, and the demand for Zog is growing steadily. It sells at 6d. and 1s. per tin. Messrs. W. B. Fordham & Sons, Ltd., York Road, King's Cross, London, N., who are the agents, inform us that sample tins to retail at one penny are obtainable. Chemists should get their share of this business.

A TELEPHONE TALK with Mr. John Dowell, Globe Works, Chatsworth Road, London, N.E., in regard to bottle-stoppers was rather interesting. The point of the conversation was the inconvenience which many wholesalers suffer through inability to get constant and trustworthy supplies of glass stoppers. This is where Mr. Dowell comes in. He has organised the production in such a way as to guarantee a steady supply of well-made stoppers for any purpose. He invites correspondence and inquiries.

THE "POISONOUS" POISON-BOTTLE, about which we wrote in our issue of October 7, has been in great demand lately for ammonia, as it meets the new requirements under Section 5 of the Poisons and Pharmacy Act, 1908. The bottle is a cheap one, and is distinct from poison-bottles by having knobby protuberances instead of corrugations, and the words "Poisonous—Not to be taken." Half-way down the neck are two depressions which grip the rubber stopper commonly used for ammonia. The "Poisonous" poison-bottle is stocked by the leading sundries houses.

"VIOLET OATMEAL CREAM" is the title which Messrs. Boulton & Co. (1909), Crayford Mills, Stratford, E., give to a new type of toilet-cream which they have introduced in collapsible tubes to retail at 6d. each. It is a semi-translucent jelly of the "vanishing cream" type. It appears to combine the antiseptic and healing properties of glycerin jelly with the protective character of oleaginous creams. It is packed in neat cartons, and the firm make a feature of providing agents for the cream with supplies of violets, moss, and natural oats to make a window-display. The cream is on the P.A.T.A. list, and as it costs 45s. per gross, it shows a good profit.

RE-SETTING CLINICALS.—There have been many methods suggested for obviating the difficulty of re-setting clinical thermometers, but probably nothing simpler than the device which has been patented by Mr. G. H. Zeal, 82 Turnmill Street, London, E.C. The essential part of this invention is a case the lid of which is fitted with a strong spiral

spring, so that the main part of the container with the clinical thermometer inside can be swayed backwards and forwards, thus bringing into play centrifugal force. We have given the method a practical test and have found it perfectly effective. An illustration of the device is given in Mr. Zeal's advertisement in this issue.

TABLET-MACHINES.—This is an appropriate occasion for drawing attention to the advantages of the tablet-machines which are made by Messrs Allen & Hanburys, Ltd., 37 Lombard Street, London, E.C. For small tablets which require to be turned out at high speed the "Duplex" machine is especially recommended, while the "B.B." machine is intended for larger tablets, the maximum size being $\frac{3}{4}$ -in. diameter against $\frac{1}{2}$ -in. on the "Duplex." The resulting tablets are equally well made, but the rate at which they are turned out is somewhat lower than in the "Duplex." The prices of the machines are 6l. for the last-named, and 5l. for the "B.B.," these including one set of dies and punches.

"RUBWEL" ADVERTISING.—New advertising matter is being issued by the Rubwel Co., Pendleton, whose distributing agents are Messrs. Locke, Tompsett & Co., 4 Redcross Street, London, E.C. New showcards are issued in two sizes, the larger 19 in. by 12 in., and the smaller 6 in. by $3\frac{3}{4}$ in. The top part of the cards is occupied by an attractive picture of "A Rubwel User," a young lady before a mirror. The cards are designed in a quiet colour scheme, which makes them suited for use in high-class establishments. The small cards are useful for placing on the counter. The company will be glad to send these showcards to applicants, together with particulars of their window-display schemes. Address their headquarters, Pendleton, Manchester.

SHOP-FITTINGS.—Messrs. Parnall & Sons, Ltd., Bristol, have recently further enlarged their factory until now the premises extend from Narrow Wine Street to Fairfax Street and Broadmead. Five and six storeys high, these blocks of buildings are connected by footbridges enabling the manufacture of a series of shop-fittings to be followed through the several departments. It is not difficult in such well organised workshops to execute promptly any order received, to maintain a high standard, and to ensure that the designs shall be in accord with modern ideas on shop-fittings. These are desiderata which Messrs. Parnall & Sons, Ltd., keep constantly before them, and their success as shop-fitters is a modern achievement: they make shops attract customers.

AN OVAL POISON-BOTTLE made of transparent glass and meeting the requirement of the Order in Council regulation for mineral acids and ammonia solution, is a desideratum which has been met by Messrs. Edward Taylor & Co., 50 and 52 Hanover Street, Liverpool. They are now making 8, 10, 12, 16, 20, 24, and 40 oz. bottles with three rows of studs on the back at each side of the words "Poisonous. Not to be taken." The result is that the bottle conforms in the fullest sense with the requirements of the regulation made under the 1908 Act. The makers say that the bottle is "admirably adapted for cloudy ammonia, ammonia preparations, etc.," with which remark we agree. The bottles are made in pale-green and actinic-green glass, which is not the least of the advantages of this make.

ROYAL COURT HAIR-DYE.—This one-solution hair-dye manufactured by Messrs. J. Knox Walker & Co., 422 Kingsland Road, London, N.E. (successors to Marion James & Ker, Ltd.), is an article of proved merit, which they put up under that title with the chemist's own name and address if desired, or under other titles according to the individual demand. The firm have a large variety of labels and cartons for the dye, which give a wide choice to retailers and wholesalers who desire to have their own dye. With six dozen of the dye, or one gross of it put up under private brand, they supply attractive plaster window-models and other advertising-material which help to sell the dye. The latest model is a striking plaque, 16 in. by 10 in., with a crowned queen's head in the centre. It is white with a touch of gold here and there, and is a most effective advertisement.

THE ALLIANCE DRUG AND CHEMICAL Co., 34 Leadenhall Street, London, E.C., have issued a 32-page price-list for January. The list is prefaced with a number of notes, including a statement to the effect that the National Insurance Act may entail much increased dispensing, and the company have accordingly inserted two pages of quotations for concentrated mixtures, chiefly derived from Hospital Pharmacopœias, which may be ordered by number only. The notes also contain full particulars regarding the company's terms of business for export and home trade, as well as a series of tables showing freight, railway, and parcel charges, and fully one-half the list is devoted to the quotations for drugs and preparations from A to Z. There are also quotations for tablets, lozenges, pills, and druggists' sundries. A copy of the catalogue can be sent to any of our subscribers on application.

"RODINE" is the name of an exceptionally successful rat-poison, which is manufactured by Mr. Thomas Harley, 29 High Street, Perth. We have watched the growth of this specialty with interest. The maker has quietly and persistently built up a wide connection with the article, and now it can be said fairly that he has made a phenomenal success of it. It is a non-scheduled preparation, which is sold in 6d., 1s., 2s., 3s., and 5s. tins, and Mr. Harley has received from all parts remarkable accounts of its devastations in the rat world. The latest is a report from Mr. J. S. Hepworth, chemist, Loughborough, stating that one of his customers got 300 dead rats from a shilling tin of "Rodine." Other chemists have also reported similar results. "Rodine" is used by leading railway, shipping and industrial companies in the United Kingdom, and Mr. Harley is now inviting chemists to take up the agency on terms which yield 100 per cent. profit.

SPHAGNOL PREPARATIONS.—It is a remarkable circumstance that peat yields on distillation a tarry product, apparently midway in character between coal tar and birch tar. This product, under the name of "Sphagnol," was placed on the market a few years ago in the shape of several preparations, consisting of a 10-per-cent. ointment, which retails at 1s. 1½d. per tin, 10-per-cent. suppositories retailing at 2s. per box, and "Sphagnoline," an emollient toilet-cream containing 5 per cent. of sphagnol, which retails at 1s. 1½d. per tube. Besides these there are three soaps—a toilet-soap containing 5 per cent. of sphagnol, which retails at 1s. 6d. per box of three tablets, and a shaving-soap of the same strength retailing at 1s. per stick, while for medical purposes a soap of 15 per cent. strength is supplied. We have had the opportunity of inspecting a large number of letters received from registered medical practitioners during the past three months, in which they report upon the effects of one or other of these preparations in the treatment of blepharitis, eczema, hæmorrhoids, pruritus, psoriasis, suppurations of vaccination, varicose ulcers, and other ailments, all in the most satisfactory terms. The toilet and shaving soaps are specially suitable for persons who have irritable skin, and all the preparations are now getting to be in steady demand. They are manufactured by Peat Products (Sphagnol), Ltd., of 18 and 19 Queenhithe, Upper Thames Street, London, E.C., who will be happy to supply chemists with further information, especially when this can be placed before medical men to mutual advantage.

FLEXIBLE GELATIN CAPSULES.—Messrs. Robert Ferber & Co., 191-195 Southwark Bridge Road, London, S.E., inform us that their business is now confined entirely to the manufacture of gelatin capsules. They have submitted to us samples of capsules and packages of capsules such as they supply for export trade. These include "Blenosal," a special sandalwood-oil compound, put up in circular green enamelled tins, with which Messrs. Ferber & Co. supply an artistic and attractive show-card. This capsule has a high reputation in the British Colonies, as also have the firm's "Santal and Salol Compound" capsules, sandalwood-oil, cubebs, and copaiba, santal and copaiba, and other specifics. We have before us specimens of these as put up by the firm for chemists in Durban, Bombay, Poona, Winnipeg, Toronto, and London (Ontario); cardboard boxes, enamelled tins, and bottles being used according to the requirements of the district of sale or the taste of the retailer. We may note

in the case of sandalwood-oil capsules that the firm make them by drops or minims as desired. We have another specimen before us of bottled capsules for Burma, the compound being a special specific which belongs to the retailer, and is compounded and capsuled by Messrs. Ferber. Another example of the work they do is a box of capsules, each being equal to two Blaud's pills, and containing also the equivalent of 2 minims of arsenical solution and one-fifth grain of strychnine. In Canada Messrs. Ferber have a dépôt, and their own representatives call upon medical men. Several kinds of capsules (e.g., ol. ricini mlxxx.) are specially made for Canada. Messrs. Ferber's Australian agents are Messrs. Kemp & Co., of Sydney; Messrs. Glyn-Jones & Pearson represent them in New Zealand; and they have their own resident agent in Johannesburg, who covers the South African trade. So far as the home trade is concerned, Messrs. Ferber supply retailers through wholesale houses, but chemists can get through these houses, or direct from the firm, copies of the showcards which they have for all classes of their goods, including such veterinary preparations as soluble dog-capsules.

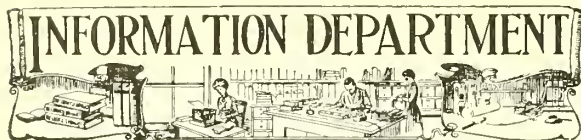
Quinine in Java.

New Factory Proposed.

THE annual meeting of the Preanger Cinchona Bond and the Association for Promoting Cinchona Cultivation was held at Bandung in Java on December 16. No Press representatives were admitted to the meeting, but the following information was subsequently supplied to the Press. There was a good attendance, the voting-power of the meeting being 43. Voting is arranged according to the size of the garden represented, a garden of 500 bouws having one vote, 500 to 1,000 bouws two votes, 1,000 to 1,500 bouws three votes, and so on.

A committee, consisting of Heer Lovink, Director of Agriculture, Heer Van Leersum, Director of the Government Cinchona Plantations, and Heeren Buss, Dinger, van Riemsdijk, and Loudon, which has been in charge of propaganda and other work of the joint bodies during the year, made the following report. An office has been opened at Buitenzorg, at which statistical and other inquiries relating to cinchona and quinine have been conducted. A pamphlet giving an account of quinine-manufacture throughout the world was prepared and issued to members only, while for propagandist purposes, two leaflets on "Malaria and its Conquest by Quinine" and "The Value of Quinine in Combating Malarial Fever" were distributed to the general public. A large number of the better-known brands of quinine were also examined, and at present quinine substitutes and other remedies against malaria are being investigated. An essay on the use of quinine in the Dutch East Indies, the best methods of using it, and of promoting its use in other lands, is being compiled.

Three prominent Dutch cinchona-planters are now in Amsterdam endeavouring to make better terms for their colleagues with quinine-makers in Europe, and they have been authorised to state that unless these better terms are conceded a new quinine-factory will be opened in Java with capital provided by the planters. To this official information the "Java-Bode" adds that the decision to erect a factory was arrived at at a meeting of the Preanger Bond held the evening before the joint assembly referred to above. That journal is of opinion that before the joint conference planters were not very enthusiastic about this proposal, and showed a disposition to grumble at the dilatoriness of the committee that is acting for them, principally on the ground that the committee has been at work for a year, and there has been no rise in the price of bark. The air of mystery maintained as to the proceedings of the committee was also commented on adversely. On the whole, however, the "Java-Bode" is of opinion that real though slow progress is being made, and that things will move rapidly as soon as Heer Buchler, the representative of the quinine-makers, arrives in Java. The report goes on to point out that the Bandung Quinine-factory will offer strong opposition to the proposal to erect a new factory in Java.



Postal Address:

C. & D. INFORMATION DEPARTMENT, 42 Cannon Street, London, E.C.

Telegraphic Address: "CHEMICUS LONDON."

Telephone No.: BANK 852 (two lines).

INFORMATION WANTED.

We would be obliged if any reader would inform us by post-card or telephone who are the makers or agents of the articles mentioned in the following inquiries:

- 44/34. "Prunin."
- 49/12. "Orion" flask.
- 33/55. "Astral" face-cream.
- 29/67. Braggi's "Omnicura."
- 35/34. Raffan's catarrh-cure.
- 49/11. "Calsalettes": supply.
- 33/64. "Silloff": what is it?
- 42/41. Hasselby's silvering fluid.
- 25/2 and 29/71. Hirsch's trusses.
- 35/34. Suppliers of "Stomalix."
- 46/1. "Dylol" (synthetic musk).
- 52/15. Dr. Goodchild's milk-food.
- 52/3. Berry's "First-aid" outfits.
- 38/19. "Hemostyl" in glass tubes.
- 47/59. "Petersham" belt or binder.
- 25/2. "Purisine" disinfecting-fluid.
- 50/33. "Tot" cachets: London agents.
- 51/23. "Inholin technically pure": supply.
- 50/39. "Ruby Balm" (Hygienic Research Co.).
- 50/390. Agents for Albersheim's "Uralla" cream.
- 42/24. Gavin Bauregard's "Crème du Savon Anti-septique."

INFORMATION SUPPLIED.

During the past week we have answered inquiries as to the makers or sellers of the following articles. The information will be repeated to other inquirers who send to this Department a stamped and addressed envelope for the purpose.

- Albertol (41/4).
- Allantoin (44/20).
- Alumina soap (45/22).
- "Amami" nail-polish (38/22).
- Aponia (50/25).
- Austin's carbolic iodine inhalant (47/57).
- Bath-powder boxes (50/38).
- Catandir compound (15/39).
- Castell's cough-cure (48/2).
- Castoline (50/201).
- Cas-To-Rine (50/300).
- Castorine lubricating oil (50/30).
- Claxton's ear-cap (46/50).
- Chloride of lime (for export to Italy) (46/26).
- Cosmoline (52/15).
- Enamel signs (51/31).
- Factory masks, etc. (50/43).
- Formozone (47/71).
- Ink-containers (glass and stoneware) (50/53).
- Lactic cheese (37/73).
- Leciform (43/58).
- Leciferrin (43/580).
- Listerine (primary agents) (51/18).
- Liver saline (special) (40/32).
- Lohse's perfumes (London agents) (44/44).
- Maple sugar (36/1).
- Mercolint bib (44/33).
- Mercury (in 2-cwt. to 4-cwt. lots) (41/56).
- Mothersill's sea-sickness remedy (40/64).
- Muscatol (35/557).
- Neurosol (35/55).
- Orange sticks (American inquiry) (42/1).
- Ozoline (43/23).
- Pergenol-tablets (38/21).
- Pill-makers (45/33).
- Pine-wood chest-protectors (48/74).
- Hopkinson's liq. colchici sal. (49/13).
- Prince Albert cachoux (35/22).
- Purgen (46/25).
- Radio-active menthol iodine (40/28).
- Rebman's calf-lymph (39/56).
- "Red Cross" pills (43/8).
- Rhycol (44/19).

- Richter's Pain Expeller (46/39).
- Riding-pads (51/65).
- Saxolite (48/19).
- Shannon's patent soothers (38/20).
- Slack & Brownlow filters (38/200).
- Sodium phosphate, commercial (Canadian inquiry) (37/470).
- Soc. Chem. Industrie in Basle (London address) (52/16).
- Soothers (tubular insertion) (43/53).
- Stationery (37/52).
- Stoneware jars for inks (18/300).
- "Sureco" elastic hosiery (30/53).
- Tetlow's swansdown-powder (London agents) (43/6).
- Thew's peptonised cocoa (40/34).
- Thymoline preparations (50/39).
- Ticket-writers (43/60 and 48/15).
- "Tot" cachets (50/33).
- Tripoli, commercial (40/34).
- Tube-filling machines (39/730).
- "Tuskoid" combs (50/11).
- "Twenty-Mule Team" brand, borax (49/14).
- Uric acid, technically pure (51/23).
- Vergotonine (44/45).
- Vernorel sprayers (47/7).
- "Victory" liniment for horses (37/15).
- Vogeler's Compound (37/14).
- Zulon (veterinary) (44/21).

New Remedies.

(Supplemental to those in "C. & D. Diary," 1912, p. 466.)

Barzarin.—The extract from a South American plant, recommended in the treatment of diabetes.

Iodostem.—A thick syrupy fluid obtained by concentrating grape-juice. Contains iodine in loose combination with tannin. Recommended in gout, rheumatism, and tubercular affections.

Imido-Roche.—A 1-in-1,000 solution of β -imido-azoly-ethylamine present in ergot. This substance has an action resembling that of adrenalin, and apparently plays a rôle in albumin metabolism.

Azodermin "Agfa."—The acetyl compound of amido-azo toluol. A yellowish-red very fine powder, soluble in ether and alcohol. Employed as an 8 to 10 per cent. ointment in the treatment of wounds.

Prothemin.—A blood-preparation containing the total albuminous constituents in addition to the organic compounds of iron and phosphorus naturally present. Dose: One teaspoonful two to three times a day.

Iodone.—A preparation obtained by the action of iodine upon the anhydride of phthalic acid. Lustrous crystalline substance with a dark-green colour. In the presence of moisture it liberates 52 per cent. of iodine. Issued in the form of a dusting-powder and an ointment diluted with an inert substance so as to liberate 2 per cent. iodine.

Insipin.—A new tasteless quinine derivative, quinine-di-glycolic ester sulphate. Contains 72.2 per cent. of quinine. A white, tasteless crystalline powder, insoluble in cold water. The addition of a trace of sulphuric acid causes solution; this solution shows a blue fluorescence. The preparation is readily decomposed by alkalis. Particularly indicated in the treatment of malaria; 1.5 to 2 grams of insipin correspond in action to 1 gram of quinine hydrochloride. Should be kept protected from light.

Adamon.—The name given to borneol dibromo-dihydro-cinnamate = $C_6H_5 \cdot CHBr \cdot CHBr \cdot CO \cdot O \cdot C_{10}H_{17}$. This preparation is obtained by the action of bromine on borneol cinnamate, and represents the first solid bromine-containing ester of borneol yet produced. It occurs as a white, almost tasteless and odourless crystalline powder, insoluble in water, readily soluble in ether and in chloroform; m.p. about 73° C. It contains about 35 per cent. of bromine and the same proportion of borneol. Dose: $\frac{7}{2}$ grains as a sedative two to three times a day.

MOROCCAN BEESWAX.—The exports of beeswax from Tangier during 1910 amounted to 392 cwt., valued at 27,620*l.*, against 2,266 cwt., valued at 2,618*l.*, in 1909. Germany received 373 cwt. and France 19 cwt. From Paraiche exports were 739 cwt., against 710 cwt. in 1909, Germany receiving 614 cwt. and France 69 cwt.

QUININE is sold at all post offices in British Guiana to the general public at cost price. It is also distributed by the sugar estates free to their labourers. Prisoners and members of the police force are supplied by the Colony with free quinine. There were 7,556 fewer cases of malarial fever treated in the estates' hospitals in 1910 than in the previous year.

OBSERVATIONS & REFLECTIONS

By Xrayser II.

The Spirit Question

is still with us, but, if we may judge from the hopeful tone of Mr. J. C. Umney's remarks, there is some prospect of a more or less satisfactory arrangement being reached with the Excise Department, and I presume the Exchequer authorities will in that event also be satisfied. It is a pity that we must write "more or less satisfactory," but when so many interests are concerned it is inevitable that the final solution of the problem must be disappointing to somebody.

Vaccination against Enteric

has been compulsory in the British Army for some half-dozen years, and the India Office has for a long time recommended that civilians be inoculated before proceeding to India. The result has been seen in the greatly reduced incidence of typhoid fever in the Army and in the Civil Service in that country, and where cases of fever do occur the disease is slight and the mortality small. For this great advance in preventive medicine we are entirely indebted to Sir William Leishman and Sir Almroth Wright, who were jointly responsible for the working out of the idea and for the introduction of vaccination into the Army. The work of these men is apparently unknown to the eloquent writer of the paragraph in your last issue, otherwise he would have hesitated before he hailed Chantemesse as "the bloodless victor over the scourge of modern armies." I am quite sure that Chantemesse himself would be the last to make such a claim, and that he would agree that the laurels belonged to Leishman and Wright, who did all the spade-work, and not to men, either in America or France, who have, years after, begun to reap the results of the labours of these pioneers.

The Treatment of Hay Fever,

regarding which one of your correspondents wishes information, cannot as yet be said to have been placed on a scientific basis, but sufficient is now known as to the cause of the trouble to warrant the conjecture that a remedy will soon be found. Hitherto treatment has mainly consisted in the alleviation of symptoms. With the possible exception of Dunbar's serum, known as "Pollantin," there has been no attempt to reach the source of the "fever." Quite recently—that is, within the last few months—several articles have appeared in the medical journals in which the claim is made that a vaccine will shortly be forthcoming that will be not only curative but preventive. Hay-fever, as the name implies, is produced by the pollen of certain grasses, which has an extraordinary effect on a large number of people. The principal offender is timothy grass, *Phleum pratense*, though pollen from other varieties is also injurious. A vaccine has been prepared in some way from timothy pollen, and the results so far obtained are said to be extremely satisfactory. It does not appear that this is yet on the market, although I understand it is promised for an early date.

No Form of Medicated Wine,

says Dr. Saleeby, ought to rank as a drug under the Insurance Act. He can surely not mean to include in this prohibition such preparations as ipecacuanha or persin wine, though his other remark that every alcoholic-drug preparation ought to bear a label stating the percentage of alcohol it contains would

almost lead one to suppose so. If he meant exciseable wines only, most pharmacists will agree with him. Apart from the possibility of abuse, it would scarcely be fair to unlicensed pharmacists that drugs should be prescribed which they cannot supply and their neighbours can, since the supply of these might influence that of other things. As regards the trade in exciseable wines generally, my experience is that when a customer suffering from "that sinking feeling" to which so many amiable people are liable has the option between a medicated port and one "neat, as imported," the latter is generally chosen—a fact which seems to imply that it is not, strictly speaking, the medicinal ingredient that is desired. It may be thought that since drugs will, under the Act, only be supplied in accordance with medical prescription, there would be no danger of abuse; but doctors, like other men, sometimes take the line of least resistance, and *placebo* is a medical term.

Your Correspondent "Inquirer,"

in his letter on the dispensing of unsigned prescriptions containing a scheduled poison, raises an important question which can hardly be answered by a reference to the actual words of the Pharmacy Act. Section 17 certainly exempts, on the conditions you quote, all articles "forming part of any medicine dispensed" by a registered person, and it may be argued that the signature, whether in full or in initials, of a prescriber unknown to the dispenser is no real safeguard, and need therefore not be insisted upon; but, as "Inquirer" says, to supply poisons in this way is clearly contrary to the spirit and principle of the Act. Ought we not to be guided, as a judge probably would be, by its spirit and intention? If anybody with sufficient knowledge to compose or copy a prescription in plausible form can obtain poisons of the most virulent type without signature, declaration, or distinctive label, the Act is made to a very great extent a dead letter. Whatever may be the strictly legal interpretation of this section, I fancy the pharmacist who was convicted of supplying poisons to an unsigned, unverified order, whether it were in the form of a prescription or not, would be in rather an awkward place if any serious result followed his action. Be this as it may, I, for one, should decline to do it. It is a case calling for a proper entry in the sale of poisons book.

"Receipt" or "Recipe,"

Which is the more correct? A popular Press writer, when rebuked by a correspondent the other day for using the former, defended himself on the ground that "recipe" is not English, which is absurd. A word which has been in common use in the language for about five centuries is English, whatever its form; and the only difference between "recipe" and "receipt" in this respect is that one has been taken from the Latin, the other from the French. It is true that originally "recipe" was used even in English only in the sense of take, and after that for a long time as applying to medical formulæ and preparations simply, but since the middle of the eighteenth century there has been no distinction in this respect between it and "receipt," and originally the latter, too, seems to have had the same restricted application. Chaucer uses it when speaking of an alchemical process. Trevisa, immediately afterwards, applies it only to medicine, and not until about the year 1500 does it occur in its present extended sense. This may be because medical formulæ have survived in greater number than cookery receipts, but the same qualification would apply to "recipe" also. We may therefore take our choice of these terms. There is, however, one advantage in using "recipe"—it is less ambiguous than its rival.

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Editorial Articles.

The Turpentine Market.

ALTHOUGH a gradual advance in the price of turpentine is looked for in the early weeks of the year, when the trade demand shows signs of improvement in anticipation of spring requirements, the market has lately proved disappointing to holders, and prices for American spirit have declined about 3s. per cwt. from the highest figures prevailing early in the month. Market conditions are, however, the subject of considerable uncertainty, not only because of the larger supplies which have become available since last summer, but because of indications of increasing supplies of substitutes or wood-distilled material, competing against the genuine gum-distilled American spirit. Although current prices are well below those ruling at the corresponding periods of the two previous years, it is well to bear in mind that London stocks are still fairly heavy. The London visible supply (spot stocks and afloat combined) amounted on January 1 to 40,719 barrels, compared with 26,103 barrels a year ago. The average London spot price for 1911 was 47s. 9d. per cwt., compared with

47s. 8d. in 1910 (although the highest figure touched in the latter year was 56s., whereas in March last year it touched 74s. 3d. (the highest recorded since the War of Secession) and fell to 33s. in November. It is obvious that speculators still hesitate to take a more active share in dealings for forward delivery until these stocks have been further reduced, and the extent of prospective supplies can be more accurately gauged. Within the last four years the imports from Russia have steadily increased; this also applies to France, although only a comparatively small percentage of the French output is exported to Great Britain. The total exports from France for the eleven months to November 30 last year were 9,207 tons (of 1,000 kilos.), against 10,954 tons and 9,220 tons for the whole of the two years respectively. The American exports since the opening of the season on April 1 to October 31 (seven months) amount to 37,717 English tons, compared with 44,835 tons and 46,747 tons for the two previous full seasons. According to the Board of Trade returns our imports in 1911 were 24,006 tons, against 23,612 tons in 1910 and 22,169 tons in 1909. During the last few months considerable attention has been aroused in trade circles on both sides of the Atlantic by the prospective growth of production of an important new substitute from American sources. This substitute, of which parcels have already been received here, is made by the new "Yarian" process of extraction from the wood or pine stumps. The process is already worked on an extensive scale in the United States, where the product has given great satisfaction, and it is expected that its output is likely to be much increased this year. There appears to be no reason why this new product should not find a ready outlet.

A leading London firm of importers who are closely identified with the industry state in their annual circular that towards the end of 1911 they received sample shipments of this "stump" turpentine, which met with a ready market. In view of the rapid rate at which the eligible pine forests in the United States are disappearing to make way for new economic conditions, and the increased demand for the spirit, the advent of this pine-stump turpentine will be a great boon, as by broadening the base of supplies, prices should become more stable. Such fluctuations as those noted last year cannot but be detrimental to the trade. This turpentine is being marketed at a discount compared with the usual gum-distilled spirit which constitutes the basis of the speculative market, but its competition alongside of the latter spirit may, nevertheless, prove an important factor to be reckoned with in view of its high-grade quality. It may be mentioned that the use of pine-stump turpentine has now been adopted by the American Naval yards, and supplies will be considerably increased this year.

[Armorial Bearings in Trade.

THE decision of a Divisional Court of King's Bench, presided over by the Lord Chief Justice, in regard to the use by a veterinary surgeon on his note-paper of the arms of the Royal College of Veterinary Surgeons, has caused a little disquiet in pharmaceutical circles, because many chemists, especially those who are pharmaceutical chemists and others connected with the Pharmaceutical Society, are accustomed to use that Society's arms in the course of trade. We have never known any chemist to use the arms as they were used by the veterinary surgeon in the above case—viz., on his private note-paper, as arms or a crest. That use without a licence was the

offence, and until chemists do likewise there is no occasion for alarm. The law of the matter may be briefly stated. The Revenue Act, 1869 (32 and 33 Vict. c. 14), imposed an Excise licence-duty of two guineas a year for the use of armorial bearings on carriages, and a guinea when they are otherwise worn or used. Section 19 (13) of the Act says:

"Armorial bearings" means and includes any armorial bearing, crest, or ensign, by whatever name the same shall be called, and whether such armorial bearing, crest, or ensign shall be registered in the College of Arms or not."

Members of the Royal Family, sheriffs of counties, mayors or other corporation officers, corporations of Royal burghs, Irish peers in the British Parliament, and persons residing in Ireland are exempt from the licence. These are the only exemptions in the Act, but the Board of Inland Revenue—who administered the duties until the Finance Act, 1908 (8 Edw. 7, cap. 16), transferred the work in England and Wales to County and County Borough Councils—were accustomed to adopt the following rule:

"A licence is not required by any person in trade, for armorial bearings, or devices in the nature of armorial bearings, used in connection with matters relating merely to his trade, as on billheads, trade labels, etc., or on his shop-front; but this exemption does not extend to insurance companies, railway companies, schoolmasters, etc., and any trader who uses armorial bearings or such devices on paper for general correspondence, or otherwise than in connection with his trade only, must pay the duty."

This exempts chemists from the licence for the pharmaceutical or other arms as they commonly use them, and there has been no indication that the London County Council or any other County Council is departing from the Board of Inland Revenue's rule. During the hearing of the Kirk case Mr. Justice Avory referred to the exemptions from the obligation to take out a licence for armorial bearings set out in the official form of declaration for establishment and dog licences; these included the following:

"Shopkeepers in respect of the use of armorial bearings or devices solely as trade-marks and in the course of trade."

"Any officer or member of a club, or society, using at the club, or on the business of the society, any armorial bearings for the use of which such club, or society, has taken out a licence."

These are the exemptions as expressed by the London County Council. The Lord Chief Justice stated that there is no statutory authority for the exemptions, but we respectfully submit that (1) they have been the practice of the authorities for over forty years, and (2) use in trade as trade-marks pure and simple, not at all in the way of heraldry, is outside the purposes of the Act. Should County Councils attempt to enforce the Lord Chief Justice's dictum, by calling upon traders to take out an armorial-bearings licence for the use of arms pertinent to their business, we hope an effort will be made in Parliament to get the revenue practice embodied in a Revenue or Finance Act. So far as pharmacy is concerned, we presume that the Council of the Pharmaceutical Society of Great Britain will look into the matter, as it closely affects the interests of their graduates (if we may use the term) and members in England and Wales. Every pharmaceutical chemist who receives a diploma from the Society and puts it up in his shop is as much concerned as the chemist who puts the arms on his prescription-envelopes, labels, etc. We note that the "Journal" of the Society says:

"It is evident that anyone using the Society's arms must either take out a licence, or destroy at once any note-paper, billheads, etc., bearing the Society's arms—or, in fact, any other crest or ensign. As to the propriety of using the Pharmaceutical Society's armorial bearings, apart from the question of the licence, the Council is advised that the arms

may only be properly used by the Society in its corporate capacity."

We trust that this is not to be regarded as "official," for, besides the hasty advice as to business stationery, it almost amounts to an invitation to County Council officers to mulct some chemists in another guinea a year—which is unintentional no doubt. The matter is one in which we must "wait and see," and if fighting for maintenance of the present position is necessary, we depend upon the Pharmaceutical Council making a good fight.

Cinchona in Bengal.

THE forty-ninth annual report of the Superintendent of Cinchona Cultivation in Bengal (Major A. T. Gage, M.B., I.M.S.) for the year 1910-11, which has recently been issued, contains much that is interesting, chiefly from a planter's point of view. The report, which gives full details of the working of the undertakings, divides itself into three heads—the progress of the plantations, the harvesting of the crop, and the work at the factory. As regards the first, the year was a favourable one for the production of cinchona, there being on March 31, 1911, 2,544,817 trees, the bulk of which was *Ledgeriana*. The harvest of dry bark yielded 500,900 lb., or an increase of 174,340 lb. in the corresponding year. This was supplemented by purchases of 338,266 lb. of Java-grown *C. Ledgeriana* and 32,882 lb. of Java-grown hybrid bark. Altogether the total quantity of bark worked up in the factory was 911,725 lb. This yielded 39,980 lb., or 638,880 oz. of quinine and 150 lb. of residual alkaloid, the yield of quinine exceeding that of the previous year by 16,883 lb., or 270,128 oz. The percentage of quinine obtainable from the home-grown bark was rather less, however—3.28, against 3.67 per cent. in the preceding year. This the Director ascribes to the rather large but unavoidable mixture of immature bark resulting from the "thinning" operations on the Munsong plantation that were rendered necessary by the luxuriant growth of certain blocks on that plantation; on the other hand, the Java bark showed a yield of practically 6 per cent., 22,236 lb. of quinine being produced, from the 371,148 lb. purchased. Reference is next made to technical work in the factory, and the methods being adopted to bring about a more economic working. It is also of interest that continued experiments in the line of working out a method of quinine extraction cheaper than the present one have been undertaken by Messrs. Shaw and Richardson throughout the year, but conditions, although promising, are scarcely ripe enough yet for presenting definite proposals.

Under the heading of "factory charges" we find that the cost of quinine made from Java bark (reckoning the rupee at 1s. 4d.) was equal to 8d. per oz., and that from the home-grown bark 6d. per oz. This is arrived at in the following manner:

After deducting the amount spent on purchase of bark, on the improvement of the factory and other items not directly concerned with actual manufacture, the cost of manufacture and packing of the quinine-sulphate works out to R. 1-15 (2s. 7d.) per lb. If the cost of the proportion used up in the factory during the year of the total quantity of Java-grown bark purchased be estimated in proportion to the sum spent on the total quantity of bark purchased, the cost of the quinine sulphate yielded by the Java-grown bark works out at Rs. 5-4 (7s.) per lb., so that the total cost of quinine sulphate in the Java-grown bark was Rs. 7-3 (9s. 7d.) per lb. The average unit rate for bark at the Amsterdam auctions during 1910-11 was 3.15 Dutch cents. The quinine percentage in plantation bark being 3.28, this comes out—on the Dutch unit rate being converted into Indian currency—to practically Rs. 4 (5s. 4d.) per lb. of sulphate of quinine.

Adding to this R. 1-15, the result comes out as Rs. 5-15 (7s. 11d.) per lb., or practically 6d. per oz., as the total cost of the quinine manufactured from the plantation bark.

The question thus arises, Why should the Indian Government buy Java bark to manufacture quinine costing 8d. per oz. when they can buy their requirements of the alkaloid in the open market or direct from the Java factory at round about 6½d. per oz.? As regards the issue of quinine sulphate, there was a decline of 1,005 lb., to 22,893 lb., part of this being due to the lessened demand from the Inspector-General of Prisons, Bengal, for quinine for pice-packets, only 5,200 lb. being indented for, as against 9,280 lb. during 1909-10. There was a considerable increase in the quantity sold to Government officers, dispensaries, and medical missions, the total rising from 1,992 lb. to 2,806 lb. in the year under review. The stock account shows that on March 31, 1911, there was in store 48,664 lb. of quinine, which reserve the Director states is now practically equal to a two years' supply at the present demand for quinine. This looks as if the factory maintains a very much heavier stock than is necessary, and when it is remembered that there are always large unsold supplies of quinine and febrifuge in the hands of post-masters and others, it looks as if a great deal of money is locked up uselessly. Cinchona febrifuge is not now manufactured, as the demand is insignificant. The profit and loss account shows that after deducting non-recurring charges (amounting to Rs. 1,007) there is a balance of Rs. 20,796 (1,386l.) profit on the year's working. The moral to be drawn from the report is that India is overstocked with quinine, and yet the Government absorbs several millions of quinine tablets bought in the European market.

Sale of Ammonia Solution.

We would again remind all our readers in England and Scotland that on Thursday next, February 1, the regulation regarding the sale by retail of ammonia solution agreed to by his Majesty on July 5 last will come into force. This regulation applies to liquid preparations containing more than 5 per cent. by weight of free ammonia. On retailing such preparations they must not be delivered or sent out except in bottles or other containers rendered distinguishable by touch from ordinary bottles or containers, and they must be labelled with the name of the substance, the words "poisonous" and "not to be taken," and the name and address of the seller—that is to say, the person on whose behalf the sale is made. Preparations containing less than that (*e.g.*, ammonia liniment) are outside the regulations; so are solids like smelling-salts. For further particulars see the *C. & D. Diary*, p. 436.

Liverpool Infirmary Pharmacopœia.

When the compilation of the Provincial Hospitals Pharmacopœias was undertaken for *The Chemists' and Druggists' Diary*, we discovered that the Royal Infirmary, Liverpool, one of the important institutions of this kind in the Kingdom, did not publish a Pharmacopœia. This omission has now been made good, and a copy of the new work has been sent to us by Mr. Prosper H. Marsden, the dispenser. The little book is divided into sections, the formulæ for the various departments of the infirmary being kept together. Thus there are the general formulæ occupying the bulk of the work, and the special prescriptions employed in the gynaecological, throat and nose, skin-diseases, and eye departments. There are given at the beginning a short table of the approximate relations between the imperial and the metric standards, and a note on doses for children. The susceptibility of children to

opium is noted, and the fact that mercurials, belladonna, henbane, and arsenic are well tolerated. The formulæ reflect the abilities of the dispenser, the titles and names of the drugs being given in full Latin. Diet tables are given, and in these we notice the term "scouse," which may be unfamiliar to some of our readers. It is the name given in Lancashire to a kind of stew.

Competition with Gas Companies.

The "Gas World," in the course of an editorial article on the discussion which took place at the London Chamber of Commerce last week on the Wandsworth, Wimbledon, and Epsom Bill, remarks that—

"The chemical-manufacturers jump to the conclusion that 'purchase' confers upon the company unlimited powers as chemical-manufacturers. Of course, it does nothing of the kind. . . . Even assuming that 'purchase' will enable the company to buy tar and ammonia from other gas companies, that does not mean unlimited powers to manufacture chemicals, for the clause closes with the words 'and generally may carry on any business usually carried on by gas companies, or which is or may become incidental thereto.' That certainly does not confer upon the company power to make dyes and medicines, for instance. The chemical-manufacturers may therefore keep their minds easy. In any case, they are rather late in the day in raising their protest. We have before us three Acts, one of them as early as 1910, in which it appears. Should the company think it worth while to retain the word 'purchase,' in face of any opposition that may develop, these precedents cannot easily be ignored."

This is not all the case of the chemical-manufacturers. A further study of the clauses in the Bill will show that the powers sought for would enable the company to do a great deal more than merely trade in gasworks residuals. If they get the powers there is nothing to prevent them making, for example, sulphate of quinine, subnitrate of bismuth, or even synthetic vanillin, and it is not desirable that such wide powers as these should be given to bodies which are favoured by Parliament, so that they have complete monopoly in their own region for their special products.

Prison Drug-supplies.

Tenders for the supply of drugs and sundries to all prisons, State inebriate reformatories, and Borstal institutions in England and Wales (sixty-seven institutions in all) for the year ended March 31, 1913, will be received by the Prison Commissioners, Home Office, Whitehall, London, S.W., until noon of Tuesday, February 6. Tenders are to be at a percentage discount or premium on the prices named in the schedule attached to the tender (No. 74). All articles are to comply with the specification of the British Pharmacopœia, or if not contained therein are to be of "the best and finest quality." The quantities and deliveries are as required by the Governors. Some prices (per lb. unless otherwise stated) in the schedule are:

Acacia gummi, 1s. 9d., pulv., 2s. 6d.; acet. canthar., 2s. 6d.; acet. ipecac., 2s. 6d.; acet. scillæ, 5d.; acid. aceto-salicylic, 5d. oz.; acid. acetic, 4d., glac., 10d.; acid. arsenios., 1s. 2d.; acid. benzoic, 7d. oz.; acid. boric., cryst., 5d., pulv. 5d.; acid. carbolic, 1s. 2d., liq. 1s. 1d.; acid. chronic., 4d. oz.; acid. citric, pulv., 1s. 10d.; acid. gallic., 3s.; acid. hydrobrom. dil., 9d.; acid. hydrochlor. pur., 6d.; acid. hydrocyan. dil., 1s. 4d.; acid. lactic., 4s.; acid. nitric. pur., 9d.; acid. nitro-hyd. dil., 4d.; acid. oleic., 9d.; acid. phosph. conc., 1s. 4d.; acid. salicyl., 1s. 7d.; acid. sulph. pur., 5d.; acid. sulph. arom., 4s. 6d.; acid. sulphurosum, 4d.

It will be seen that the prices are not widely different from those in net drug lists of the large drug houses. A considerable divergence is shown in drugs such as hydrastis, menthol, and santonin, which have risen rapidly in price during the last few months. This, together with the fact that approximate quantities required are not specified, must make it difficult for tenders to be made at a uniform discount on the printed prices.

Price-list Filing.

In this article Mr. Henry R. Cheney, Ph.C., of Leominster, describes the simple system by which he files trade catalogues and price-lists for easy and quick reference.

NEARLY every mail brings a fresh batch of price-lists, catalogues, etc., many of which are consigned to the waste-paper basket, others are put away (in many instances carefully enough) in a drawer or other convenient place for future reference. When the time comes that a certain price-list is wanted—generally in a hurry—it is often no easy matter to turn it up without a lengthy search, and almost an impossibility to turn up three or four lists for comparison unless one has some kind of system for easy reference.

The object of this article is to place before the readers of THE CHEMIST AND DRUGGIST a system I have adopted for several years, which I find works out very satisfactorily. It has the additional merit of being economical, only a 1d. or 2d. exercise-book being required.

Perhaps the best way to describe my system will be to give a brief general idea of the plan, and then to go into working details. In the first place, then, instead of a crowded drawer or shelf of price-lists, etc., I have a dozen or so of brown-paper parcels, each tied up and numbered and labelled, and an index-book. When I require a certain price-list, say, Brown's Pills, I refer to catalogue-index under B, which gives the number referring to the parcel where it will be found.

For details of the system I think the best plan will be to state exactly how I commenced to deal with the heterogeneous mass of lists that had accumulated in order to bring them into a definite system for easy reference.

First of all, I decided on the following headings as most suitable for my own requirements; other pharmacists might with advantage add to or take away from this list:

1. Agricultural, veterinary, etc.
2. Stationery, labels, etc.
3. Lozenges, pills, tablets, etc.
4. Indiarubber goods.
5. Brushes.
6. Perfumery, soaps, toilet preparations, etc.
7. Shop-fittings.
8. Photography.
9. Various.

Then I separated the price-lists into nine heaps corresponding to the above headings, the ninth containing all those which did not come under either of the headings 1 to 8. I found that No. 1 heap contained sufficient price-lists for one parcel; Nos. 2, 3, and 4 together made a fair-sized parcel, not too large for ready reference; Nos. 5, 6, and 7 another; No. 8 (photography) merited a parcel all to itself; No. 9 consisted of some eighty odd price-lists of every imaginable article, from the most useful to those of remotest use to the chemist. These I divided, regardless of any attempt at order or system, into four heaps of about twenty lists in each.

Then I began to make a catalogue-index, entering all the lists in heap No. 1 in alphabetical order under the heading: "1. Agricultural, veterinary, etc.," made a parcel of those lists, and labelled it, "1. Agricultural, veterinary, etc." 2, 3, and 4 heaps formed parcel No. 2, and were dealt with in almost the same way, the only difference being that a thick brown-paper band was wrapped round each heap before the three were made into one parcel, labelled thus:

{ Stationery, labels, etc.,
Lozenges, pills, tablets, etc.,
Indiarubber goods,

which also formed the next three headings in catalogue-index.

Heaps 5, 6, 7 formed parcel No. 3, and the photographic lists parcel No. 4. The rest I simply parcelled up with consecutive numbers and the word "Various" (these can, of course, be added to *ad inf.*), and indexed them under the headings, "5. Various," "6. Various, etc."

The catalogue-index is divided into two parts, the first

being a complete list classified as above, and the second part containing in alphabetical order the names of firms (with article or principal articles opposite), followed by the number denoting the parcel in which the price-list is to be found. I will give a few entries in both parts of index-book as illustration, using letters in place of names of firms:

PART 1.

General List.

1. Agricultural, Veterinary, etc.:

A & Co. ...	...	...	...	Weed Killer
B & Co. ...	...	...	...	Sheep Dip
2. Stationery, Labels, etc.:

C & Co. ...	...	...	...	Bags, etc.
D & Co. ...	...	...	...	Labels
2. Lozenges, Pills, Tablets, etc.:

E & Co. ...	...	...	...	Lozenges, Capsules
F & Co. ...	...	...	...	Tablets
2. Inciarubber Goods:

G & Co.				
H & Co.				

PART 2.

Alphabetical Index.

- | | | | | |
|-------------|-----|-----|-----|----------------|
| A & Co. ... | ... | ... | ... | Weed Killer, 1 |
| B & Co. ... | ... | ... | ... | Sheep Dip, 1 |

It is advisable to leave a good space in each part for subsequent additions. As new price-lists arrive they are simply kept on a shelf, and once a month indexed, old duplicates being, of course, thrown out. It is desirable not to let the parcels become too bulky; mine are arranged so that they are more or less uniform in size, which will explain why I sometimes put two or three different lots in one parcel.

Of course large bound catalogues naturally find their destination on a bookshelf.

Copaiba.

By T. Tusting Cocking, Pharmaceutical Chemist.

THE CHEMIST AND DRUGGIST of January 6, 1912, contains a note by Mr. E. J. Parry on copaiba, in which he criticises a process for the detection of African copaiba, published by me some time ago (*C. & D.*, July 23, 1910). A modification of this process has been included in the recommendations of the Committee of Reference in Pharmacy (Third Report, May 1911).

Mr. Parry's statement that it is essential to distil the volatile oil in a current of steam before examination is not borne out by the experiments carried out in the laboratories of The British Drug Houses, Ltd. From these experiments it was found that the characteristics of the oil were the same, whether it was separated from the resin by distillation in steam or *in vacuo*. This contention is supported by the following table, which gives the optical rotations of the volatile oils prepared from the same copaiba by three different methods, as well as the rotations of the ten equal fractions subsequently distilled from these oils *in vacuo*:

OIL FROM A GENUINE COPAIBA.

	No. 1. Steam- distilled	No. 2. Dry- distilled	No. 3. Chemically separated
Original oil	-22.9°	-22.9°	-23.1°
1st fraction	-21.3°	-20.6°	-21.3°
2nd "	-21.3°	-21.3°	-20.6°
3rd "	-21.1°	-21.2°	-21.7°
4th "	-21.5°	-21.5°	-22.5°
5th "	-21.7°	-22°	-22.5°
6th "	-22.8°	-22.6°	-23.2°
7th "	-23°	-22.8°	-23.5°
8th "	-23.8°	-23.7°	-21.1°
9th "	-24.5°	-25.2°	-25.1°
10th "	-27.9°	-26.6°	-23.8°
Difference value	-6.6°	-6.0°	-5.5°
Mean rotation	-22.9°	-22.7°	-23.2°

No. 1 was obtained by distilling in a current of steam, product 50.3 per cent.

No. 2 was distilled *in vacuo*, pressure about 25 mm. of mercury, product 50.0 per cent.

No. 3. This was prepared by shaking the oleoresin with aqueous potash and ether, separating the ethereal layer, and again extracting the alkaline liquid with several portions of ether; washing the bulked ethereal liquids with water and distilling off the ether at a low temperature, and finally submitting the residue to steam distillation. By this means the bulk of the resin was separated before distilling off the oil. Product 51.5 per cent.

The quantities of oil obtained from Nos. 1 and 2 are almost identical, so also are their optical rotations; and the difference values and rotations of the ten fractions are, allowing for experimental error, as close as could be expected, thus showing that No. 2, though dry-distilled *in vacuo*, contains no resin oil nor any decomposition product, but is identical with the steam-distilled oil No. 1.

When distilling *in vacuo* a large splash-head of special design (see sketch) has always been used; this prevents any bumping over, and also acts as a dephlegmator. Distillation is continued until the manometer commences to fall; this fall is caused by the decomposition of the resin, resin oil being formed and carbon dioxide liberated, thus increasing the pressure in the apparatus. When using this splash-head it is almost impossible to get any resin oil to distil over (since the latter has a much higher boiling-point than copaiba oil, and application of a greater heat only causes the resin to decompose more quickly, still further increasing the pressure and so raising the boiling-point).

In my experience all genuine copaibas yield volatile oils which in every case have a higher rotation than the first 10 per cent. distilled *in vacuo* from them.

In my communication referred to, mention was made of the somewhat similar effect upon the "difference value" caused by the presence of gurjun oil.

During the past year or so I have examined several samples of copaiba, which gave figures similar to those mentioned by Parry. Without exception the oils distilled from these gave marked colour reactions for gurjun, although the same tests on the oleoresins themselves gave negative results. I estimated the proportion of adulterant present in each case to be about 5 to 6 per cent. The following table shows the figures for two of these oils which contained gurjun:

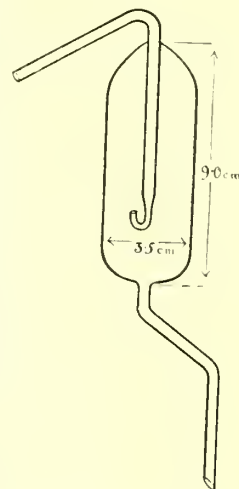
Original oil	...	...	...	-9.1°	...	-10.5°
1st fraction	...	...	...	-9.4°	...	-10.3°
2nd "	...	...	...	-9.3°	...	-10.5°
3rd "	...	...	...	-9.4°	...	-10.6°
4th "	...	...	...	-9.1°	...	-10.6°
5th "	...	...	...	-9.2°	...	-10.5°
6th "	...	...	...	-9.2°	...	-10.5°
7th "	...	...	...	-9.0°	...	-10.6°
8th "	...	...	...	-9.1°	...	-10.5°
9th "	...	...	...	-8.4°	...	-10.5°
10th "	...	...	...	-9.0°	...	-10.3°
Difference value	...	...	...	+0.4°	...	0
Mean rotation	...	...	...	-9.14°	...	-10.45°

Analytical Laboratory of

The British Drug Houses, Ltd., London.

PLASTER-OF-PARIS DRESSINGS are often troublesome to remove, and various expedients are employed for the purpose of facilitating the process. Stransky ("Semaine Médicale") finds that by moistening a section with vinegar on a pledget of cotton-wool, the plaster is completely softened within a minute, so that the dressing can be easily divided with a knife or scissors.

THE imports of medicines and medical appliances into Cyprus in 1910 amounted in value to 3,123£, or 31% less than in 1910.



PHARMACEUTICAL SOCIETY.

NORTH BRITISH BRANCH.

THE third evening meeting of the session was held at 36 York Place, Edinburgh, on January 17—Mr. J. P. Gilmour, Glasgow, in the chair. The CHAIRMAN at the outset remarked that for the second time in twenty-five years Mr. Hill, the Assistant Secretary, was absent from a scientific meeting on official business in London, and his place would be filled by Mr. Tait, upon whom he called to read a paper contributed by Mr. Thomas Dunlop, Ph.C., Glasgow, on the subject of

DISPENSING NOTES.

Mr. Dunlop said dispensing produces a perennial stream of material which arrests the pharmacist's attention and demands correction in some instances and investigation in others. This is brought about largely through prescribers unwittingly ordering drugs and chemicals which are incompatible. He emphasised the necessity alike to prescriber and patient of dispensing being in independent and competent hands.

I.

Ext. casc. sag. liq. ...	...	...	℥xxx.
Mag. sulph. ...	...	...	gr. xxx.
Tr. belladon. ...	...	...	℥ij.
Spt. chlorof. ...	...	...	℥viij.
Aq. dest. ad ...	...	...	5ss.

Mitte 5viij.

The customer requested that only half the quantity be made up, as it deposited so much and the deposit adhered to the bottle, giving it the appearance of being varnished inside. With consent the addition was made of an ounce of mucilage of tragacanth, making it extemporaneously with 6 grains p. tragac. and the spt. chlorof. and 2 oz. of water, with which the liq. ext. casc. was mixed, adding the tr. belladon. and finally the mag. sulph. dissolved in water q.s. The addition had the desired effect.

II.

Tr. nuc. vom. ...	...	...	5ij.
Aq. ad ...	...	...	3vj.

The result of investigation showed that such a dilution of tr. nuc. vom. develops fungoid growth in forty-eight hours. Of the several preventive measures tried chloroform-water stood the test of time.

III.

Strontii bromid. ...	...	...	5ij.
Ext. casc. sag. evac. ...	...	...	5iv.
Potass. bicarb. ...	...	...	5ij.
Tr. aurant. ...	...	...	5iv.
Inf. gent. co. ad ...	...	...	5iv.

The chemical incompatibility of this prescription results in the special virtue of the strontium bromide being neutralised by the pot. bicarb.

IV.

Sod. bicarb. ...	...	...	3iss.
Sod. sulphocarb. ...	...	...	3ss.
Tr. nuc. vom. ...	...	...	5j.
Tr. zingib. ...	...	...	3iij.
Glycer. pepsin. ...	...	...	3iss.
Inf. gent. co. ...	...	...	3vj.

Trouble in dispensing this prescription arose from the presence of an impurity in the glycer. pepsin. When the tr. nuc. vom. was added the mixture turned bluish black, the suspended ginger resin intensifying the unsightly appearance. The presence of iron in the glycerin of pepsin was the cause of the colour.

V.

Sod. bicarb. ...	...	...	5ij.
Sod. salicyl. ...	...	...	5ij.
Phenazon. ...	...	...	5j.
Glycer. pepsin. ...	...	...	...
Liq. bism. ...	...	...	aa. 5j.
Tr. capsici ...	...	...	℥x.
Aq. cinnam. ad ...	...	...	3vj.

The presence of iron caused a red colour owing to reaction with the sodium salicylate. Recently in making

up an 8-oz. lotion containing 30 grains sod. salicyl. and 60 grains acid. boric. difficulty has been found in obtaining a boric acid that does not tinge the solution perceptibly.

VI.

Ung. hydrarg. co. ...	...	...	5iv.
Ung. iodi ...	...	...	5j.
Ung. petrol. mollis ...	...	...	5iij.

In this prescription the iodine is absorbed by the mercury, but whether the prescriber intended to get an iodine or an iodide of mercury effect was not known.

VII.

Hydrarg. perchlor. ...	...	...	gr. j.
Pot. iodid. ...	...	...	5ij.
Inf. calumb. ad ...	...	...	5iij.

The mixture is practically Mayer's reagent for alkaloids. The precipitate in the bottle, which consists of the double iodide of mercury and berberine, had an orange-yellow colour resembling iodide of lead. As the prescriber could not be communicated with, half an ounce of mucil. tragac. was added. A better medium for the salts would be either inf. gent. co. or inf. quass.

VIII.

Tr. iodi ...	...	...	℥iiss.
Liq. strych. ...	...	...	℥v.
Tr. digital. ...	...	...	℥xij.
Ext. malti liq. ad ...	...	...	5ij.

This prescription, although such a dangerous combination, was dispensed without question, as Mr. Dunlop said "it would have been presumption on his part to have disputed the infallibility of the prescriber."

IX.

Sod. bicarb. ...	...	...	5ij.
Pot. iodid. ...	...	...	gr. xx.
Lith. citr. ...	...	...	5j.
Sod. sulphat. ...	...	...	5ss.

Ft. pulv. divide in xij.

Although the B.P. describes lithium citrate as a deliquescent salt, the author had never found it to be so unless, as in this prescription, it is placed in contact with a hydrated salt. As the prescription was for single powders, he used an equivalent proportion of exsiccated sodium sulphate.

X.

Amm. bromid. ...	...	...	5ij.
Ac. hydrobrom. dil. ...	...	...	5iij.
Tr. nuc. vom. ...	...	...	5j.
Elixir glusidi ...	...	...	5ij.
Inf. quass. ad ...	...	...	5iv.

On adding the elixir glusidi a precipitate is formed. Saccharin being a derivative of benzoic acid, it was to be expected that its chemical reactions would be similar. Soluble gluside in solution is not affected by acetic, citric, or tartaric acid, but is precipitated by mineral acids. That being so, it can only be dispensed in neutral or alkaline mixtures or in presence of an organic acid.

XI.

Sod. salicyl. ...	...	...	5j.
Spt. aeth. nit. ...	...	...	5iij.
Liq. amm. acct. ...	...	...	5vj.
Syrupum ad ...	...	...	5vj.

The acetate prevents the liberation of iodine from iodides by spt. aeth. nit., but in this case the liq. amm. acct. did not prevent the interaction between the spt. aeth. nit. and the salicylate. By neutralising the spt. aeth. nit. with the pot. bicarb., the change was not so rapid, while with the addition of 2 grs. of sodium thio-sulphate it is greatly retarded and modified, the resulting mixture being brown instead of claret-coloured.

Mr. DUNLOP mentioned he had always received courtesy from the medical profession when he had had occasion to communicate with them on points requiring attention on their part. He did that by letter, as he thought that the cases are better and more cogently stated in that way, and consequently make a greater impression than a telephone message and verbal explanation.

Mr. BOA said Mr. Dunlop had not told them how the iron had been introduced into the glycerin of pepsin. Mr. Dunlop had given a reasonable commentary on the whole of these prescriptions, and personally he did not think

he could correct anything he had said. The subject is one in which they are all interested.

Mr. C. F. HENRY said with regard to No. 1 that he had dispensed it once or twice, and had noticed a deposit on the sides as well as the bottom of the bottle. He suggested the addition of ammonia or potassium hydrate to prevent the coating, but he would not add either the one or the other without the sanction of the medical man.

Mr. FORRET said it is marvellous how some prescriptions come to be written. He had one the other day containing a mixture of sodium bicarbonate and Benger's liquor pepticus, the latter being an acid preparation. He was unable to communicate with the writer of the prescription, so neutralised the liq. pepticus with the bicarbonate before corking the bottle. In No. 1 he had found compound tragacanth powder useful in preventing the precipitate from caking.

Mr. COWIE attributed the precipitate in No. 1 to the combination of ext. cascara liq. with the salt. The acid of the salt is the cause of the difficulty, and he would have suggested that the magnesium sulphate be put into a separate mixture. The contamination of glycerin of pepsin with iron might be due to the hydrochloric acid used in making the preparation. He was not sure that the colour was due to iron in No. 5. In No. 10 he should have asked the prescriber to keep out the hydrobromic acid. With regard to No. 11 if a little ammonium carbonate had been added there would have been no further trouble except that the mixture would have darkened slightly.

Mr. GLASS, Mr. PLENDERLEITH, and Mr. MERSON continued the discussion, and Mr. MCDIARMID remarked that he did not think it possible to get a hydrochloric acid free from iron.

A vote of thanks was given to Mr. Dunlop for his paper.

AROMATIC WATERS.

Mr. J. A. FORRET then opened a discussion on "Aromatic Waters: the Relative Merits of Distillation and Simple Solution of the Oil." Mr. Forret explained that this discussion had been suggested by the remarks made at the last meeting respecting the relative merits of cinnamon-water distilled from the bark and that prepared by dissolving the oil in water. For the production of a saturated aqueous solution of essential oil, the object or advantage of direct distillation with water from the drug, or redistillation, as in the case of the two mints, is not apparent. Though a distilled water is said to have a fuller and more delicate aroma, he was not sure that this claim had been substantiated. Mr. Forret mentioned various methods for preparing aromatic waters directly from the oils. Magnesium carbonate and oxide, calcium carbonate and phosphate, pumice, talc, and kieselguhr have been used as filtering mediums. Kieselguhr gives nothing to water, and makes an excellent filter. In the case of rose-water, he thought one could not get full value for the otto used without the aid of alcohol. For comparison he produced samples of waters prepared from the oils and of the corresponding B.P. waters.

Mr. C. F. HENRY said he favoured the use of absorbent cotton wool and precipitated phosphate of lime as vehicles for the essential oils. A study of various processes led him to the following conclusions: (1) The quantity of oil actually dissolved by water is so small that the various processes have but little advantage over each other on the score of strength. (2) The cotton-wool process yields a product no stronger than that made by simple agitation of the oil with water. (3) Hot solution yields the most concentrated product, and even this, when absolutely clear, will be scarcely stronger than the calcium phosphate method. In experimenting to discover the best medium, he had found in the case of kaolin that after a week or so a very fine white precipitate forms, due, no doubt, to the very fine particles of kaolin which have passed through the filter-paper. In advocating the solution of oil process in preference to that of distillation, he said the advantages of including this or a similar process in the next B.P. would be that (1) The pharmacist would be able to prepare his own aromatic waters, which he cannot

do at present, owing to the difficulties regarding the use of a still. (2) The aroma of the waters prepared from oil equals that from waters prepared by distillation, except in the case of cinnamon, where the advantage is discounted by the quicker deterioration of the distilled product. (3) Waters prepared in the way he advocated keep better and retain their aroma much longer. (4) Such waters are equally useful as carminatives, or as taste-disguising and flavouring agents.

Mr. BOA, advocating the use of the B.P. process by distillation for the making of aromatic waters, said that so far as he knew there is no record of any systematic comparison of the two methods of distillation and solution of the oil in regard to the flavour and keeping properties of these waters, and these are the two points which are of practical interest to them. It is noticeable that no matter how good the oil may be, or how careful the operator in preparing an aromatic water by solution of the oil, the product always suggests a second-hand flavour and odour. He also regarded it as important that there are other products in the distilled water than are contained in the essential oil, and such authorities as Parrish, Caspari, and Lucas, in their books point out that there are in the fruits and barks acids and ethers which come out in the distilled waters along with the oil, and give them a character which no method of making by solution of the oil can ever give. As to the keeping of the water, which is also of great importance, he said he had made waters by distillation which kept very much longer than those made by the solution of the oil in water. His experience was that after very carefully examining samples and the waters from time to time he found those made from the essential oil became smell-less and tasteless. He did not approve of Mr. Forret's suggestion of making aromatic waters by diluting an alcoholic solution, because there is always the liability of the spirit being converted into acetic acid, which would alter the character of the water altogether. If a water containing spirit is used in connection with a sulphur compound, there would be developed a most offensive odour. He could not think of any method but distillation in the case of orange-flower and elder-flower waters. He had not noticed any fungoid growth in an aromatic water of full strength, and he hardly thought such a development possible. If the water continued to be a saturated solution of the essential oil, he thought it would be sufficiently antiseptic to render the development of fungi impossible.

Mr. MERSON said they could not have a universal rule regarding the manufacturing of all the official waters. Rose and orange-flower waters could not be equalled, although they might be closely approximated by artificial waters. It is impossible to keep distilled aromatic waters, especially in hot weather, for any length of time without deterioration. If they had one pharmacist using distilled aromatic water, and another using aromatic water extemporaneously prepared, they would have another list of prescription difficulties similar to that submitted by Mr. Dunlop. The plan is to have a standardised alcoholic solution of the essential oils which could be diluted.

Mr. GLASS said he had never seen any occasion to depart from the process he recommended in a paper a few years ago, of a solution of the essential oil in hot water. He did not approve of adding alcohol.

Mr. COWIE favoured the use of distilled waters. If properly prepared, distilled water would not develop fungoid growth, because of the amount of aldehyde in the water.

Mr. MURRAY thought that, for the purpose of disguising taste, these aromatic waters are not of much value.

Mr. PLENDERLEITH thought the question of price is important.

Mr. MCDIARMID held that they had no right to use any but a distilled water prepared by a B.P. process. Such a water is so much superior that there is no comparison between it and one made by solution of the oil. A similar view was taken by Mr. GEORGE COWIE.

Mr. G. H. C. ROWLAND, Mr. McEWAN, and Mr. TAIT also took part in the discussion, and Mr. FORRET, Mr. HENRY, and Mr. BOA replied.

British Pharmaceutical Conference.

A MEETING of the Executive Committee was held at 16 Bloomsbury Square, London, W.C., on January 18. There were present: Sir Edward Evans (President), in the chair, Messrs. J. C. Umney (Treasurer), C. B. Allen, J. Laidlaw Ewing, Professor Greenish, E. M. Holmes, T. H. W. Idris, W. A. H. Naylor, F. Ransom, T. Tyrer, Edmund White (Vice-Presidents), Thomas Stephenson (Hon. Local Secretary), R. R. Bennett, F. W. Gamble, E. F. Harrison, C. A. Hill, J. Rutherford Hill, D. Lloyd Howard, and E. Saville Peck and H. Finemore (Hon. General Secretaries). Letters were read from Sir Scott Foster thanking the Conference for their congratulations; also one from the British Medical Association referring to the paper upon "Diabetic Foods."

RECENT DEATHS.—The President proposed that letters of condolence be sent to the relatives of the late Mr. J. C. C. Payne, J.P., President of the B.P.C. at the Plymouth meeting and Chairman of the Local Committee at Belfast; also to the relatives of the late Mr. Charles Kerr, who had been a member for so many years, and who, as chairman of the local committee, had contributed so largely to make the meeting at Dundee such an enjoyable one.

RESEARCH.—The following report of the Research Sub-Committee was submitted:

The Research Sub-Committee has met on three occasions, and has revised the research list, new subjects having been added, and those no longer of interest deleted. The revised list is ready for publication. Subjects have already been allotted to various workers, and five promises of papers for the forthcoming meeting have been made. Although the fact was advertised that grants were available in aid of research work, it is with regret that we report that no application has been received. The sub-committee has also considered the suggestions submitted by members regarding improvement of the Year Book, and desire to express appreciation to those members who have thus shown their warm interest in its welfare. It has been decided to recommend to the Executive that with a view to rendering the Year Book more generally useful to members, the sections devoted to new remedies and dispensing notes should be increased in importance. With regard to the section devoted to new remedies, details should be given, if possible, of dose, chemical constitution, solubility, and use, of all important substances introduced into medicine during the year. The sub-committee recommends the appointment of two sub-editors who should be responsible for these sections respectively.

The report was adopted, and it was agreed to leave the appointment of the sub-editors to the Research Sub-Committee.

PRACTICE SECTION.—The following report of the Practice Section Sub-Committee was submitted:

The Practice Section met on two occasions, when there were present: Mr. E. F. Harrison (in the chair), Messrs. R. R. Bennett, H. Finemore, F. W. Gamble, and E. S. Peck. The following subjects were brought forward, either verbally or by letter, as suitable for discussion at the meeting of the Practice Section at Edinburgh: (1) The training of apprentices; (2) the ethics of price protection; (3) the metric system as applied to pharmacy; (4) business co-operation in pharmacy; (5) the National Insurance Act. It was decided to recommend the Executive to adopt the following as the subject to be discussed: "Business Co-operation in Pharmacy: How Far is it Desirable or Practicable?" Considerable discussion ensued as to the suitability of the subject. Mr. J. C. Umney, Mr. C. B. Allen, Mr. Naylor, Mr. J. Rutherford Hill, and others were against the proposal, and considered it was not in accordance with the original suggestions as to the scope of the subjects to be discussed at the Practice Section. Mr. E. F. Harrison, who claimed authorship of the suggestion, considered it was a subject very much to the fore just now, and could not fail to produce an interesting and useful discussion. Mr. E. S. Peck was in favour because it would cause the point to be made that business co-operation in pharmacy beyond a certain point is detrimental to the individual professional spirit, and, therefore to be deplored. It was decided that the time was not an opportune one to suggest any definite discussion upon the application of the National Insurance Act to pharmacy. It was finally agreed that the following subjects should be

chosen: (1) The Training of Apprentices; (2) The Metric System as applied to Pharmacy.

SECRET REMEDIES.—Mr. Harrison proposed that the resolution on secret and proprietary medicines passed at the meeting at Portsmouth should be forwarded to the Home Office. In support of this view he thought that pharmacists should show they would not be afraid of a full inquiry into the matter. Mr. Peck seconded the proposition, pointing out that 70 per cent. of the local associations had reported favouring some alteration of the present position. Mr. Umney proposed as an amendment that the resolution be not sent. He stated that the Government had decided to hold an inquiry, and it would be dangerous, under the circumstances, to send the resolution. Mr. Ewing seconded the amendment, which after discussion, was carried by nine votes to five.

THE EDINBURGH PROGRAMME.—Mr. Stephenson submitted the programme suggested for the Edinburgh meeting. This was carefully considered and approved, and on the motion of the President a hearty vote of thanks was given to the local committee for preparing the programme.

The following is the suggested programme:

Monday evening, July 29. Reception.

Tuesday, July 30. 9.30.—Opening Sessions and President's Address in the Edinburgh University Union.

11.0. to 1.30.—Ladies' parties visit, on foot, the places of interest near the Union—e.g. Royal Scottish Museum, McEwan Hall, University Buildings, St. Giles's Cathedral, Parliament House, etc.

1.30.—Luncheon in the Union.

2.30.—Practice Section.

Ladies drive to Roslin (or elsewhere) and have tea.

8.0.—B.P.C. "At Home" in University Union: reception by the President; music; concert (Scottish songs), lantern demonstrations, etc.; informal dance at 10.30 P.M. Friends and outsiders might be invited.

Wednesday, July 31. 9.30.—Conference Sessions.

Ladies' parties visit Castle, then proceed *via* Royal Mile to Holyrood; see Holyrood and drive back in time for lunch.

1.30.—Luncheon.

2.30.—Closing Sessions.

3.30.—Excursion to Forth Bridge and Dunfermline.

8.30.—Smoking-concert.

Thursday, August 1.—10.30.—Special train to Melrose;

Visit Abbotsford; lunch at Melrose; visit Melrose Abbey, photograph; drive to Dryburgh Abbey and back; return from Melrose by special train.

9.0 P.M.—Finish-up in Union: concert, speeches, etc.; "Auld Lang Syne."

BALANCE SHEET.—Mr. Umney submitted the balance sheet and reported that for the first time for many years the Conference is practically out of debt. It was decided to print the balance sheet and distribute it to members.

LOCAL SECRETARIES.—Mr. Peck reported that the Local Corresponding Secretaries had been communicated with, and that, while a few had resigned, most of them expressed willingness to continue their duties and endeavour to increase the membership. As an instance, Mr. Cummings, of Dundee, had had printed and sent out at his own expense a postcard asking pharmacists to join the Conference and work out some simple problems in pharmacy.

INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.—Mr. Peck read a letter from Professor Remington with regard to the International Congress of Applied Chemistry to be held in Washington, and, at the request of the President, Mr. Tyrer consented to represent the Conference at that meeting. Mr. Harrison mentioned that, as Secretary, he would be glad to receive and forward any scientific communication for that body.

NEW MEMBERS.—The following sixty new members were elected: Robt. Aitken, Dunbar; W. Arkle, Lancaster; P. R. Beattie, Edinburgh; John Brown, Melrose; Nelson Brown, Edinburgh; W. C. Brinson, Chesterfield; P. W. Burr, Mold; G. H. Cole, Blundellsands; T. R. Conolly, Dundalk; Arch. Currie, Edinburgh; John Dall, Edinburgh; A. Duncan, Leith; W. Elmitt, Derby;

G. D. Elsdon, Birmingham; James Finlay, Edinburgh; Miss Ford, Kirriemuir; J. B. Francis, Wrexham; Stephen Furnival, Windsor; W. A. Frost, Minnesota, U.S.A.; J. P. Gibb, Edinburgh; D. Gilmour, Dunfermline; W. S. Glass, Edinburgh; H. C. Grimes, Blackrock; R. Glode Guyer, Edinburgh; G. R. Hankinson, Utttoxeter; John Harkness, East Ham; J. S. B. Heddle, Edinburgh; Andrew Hunter, Edinburgh; Martin Jamieson, Edinburgh; Dr. W. V. Johnston, Dublin; J. E. Levis, Skibbereen; A. T. Maxwell, Lancaster; John Maxwell, Londonderry; Roderick MacLennan, Edinburgh; D. C. Mickie, Hawick; John Morison, Edinburgh; John Muir, Edinburgh; A. A. Murray, Edinburgh; James Nesbit, Portobello; D. W. Nicholson, Edinburgh; G. R. Patterson, Ashington; J. Spence Rae, Sunderland; W. M. Richardson, Edinburgh; J. Robertson, St. Boswells; H. M. Robin, Edinburgh; J. Russell, Dundee; A. E. Sawyer, Southwold; J. B. Shattock, Lancaster; W. S. Sheppard, Colinton; R. Kathleen Spencer, High Wycombe; C. Stewart, Edinburgh; Joseph Tait, Edinburgh; J. Edward Tawell, Harrow; J. Tyrie Turner, Carrick-on-Suir; A. Walker, Jedburgh; F. G. C. Walker, Shanghai; Harold E. Webb, London; Stephen F. Webb, London; E. E. Wolfe, Kinsale; G. Victor Wright, Edinburgh.

The Search for Absolute Zero.

THE Royal Institution first Friday evening discourse of the session was given in the Lecture-theatre, Albemarle Street, London, W., on January 19. It is interesting to observe that during the interval several alterations and improvements have been made in the historic building. Care has been taken, however, to preserve the characteristics of the lecture-theatre, which are historically important. The floor-covering in the space in front of the lecture-table has been replaced by parquet flooring, but the Greek key pattern of the old floor-cloth has been reproduced in wood. Just before the lecture a young lady had an awkward fall owing to the slippery state of the floor in contrast to the old condition. There was a rush of helpers, but the young lady recovered the upright position before willing hands reached her. Another improvement has been the substitution of mahogany doors throughout the theatre, and as these have been fitted with improved apparatus for automatically closing them there is a pleasing absence of draughts, which sometimes formerly were much in evidence. The Duke of Northumberland occupied the chair, and to a very large audience Sir James Dewar lectured on "Heat Problems." He began by stating that the changing relationship of phenomena cause researchers to change their weapons, and that theories engender new ideas. Low temperature, which has been a predominant feature in that institution, is spreading very widely, and so far as the race for absolute zero is concerned, Sir James confessed that he had been outrun. "We have to admit," he said, "that we are further from the zero than our friends on the Continent, but having opened the door we need not be afraid of the guest." He then called attention to a thermometer scale which stretched across the room, and was studded with signal posts indicating important physical facts at the various temperatures. The boiling-point of helium, 2° above absolute zero, is the lowest temperature that has been attained. All modern investigation deals with temperatures between zero and 10° on the absolute scale, and involves a minute study of the apparatus and the methods of employing them. He dealt with the difficulties which workers have to face, and proceeded to show experimentally methods of measuring the differences in the pressure of gases which are employed in the determination of low temperatures. Employing the old method of Gay-Lussac for freezing mercury by means of the evaporation of ice, it was shown that in a charcoal vacuum the temperature can be lowered easily to -40° C., and by refinement of working to -70° C. It was pointed out that the limits of practical temperatures are nearly all critical temperatures. To reach a temperature of 0.4 absolute he postulated a body " x ," which should be as volatile in comparison to helium as the last-named is to hydrogen. Referring next

to the limits of gas thermometers, it was stated that the smallest bulbs that can be employed are 5 to 6 c.c., and that the limit of error is about 2° . With a perfectly accurate thermometer registering 3° absolute Onnes may have been within 2° of absolute zero. Branching off now to speak of the isolation vessels, Sir James Dewar said it was nineteen years ago that very evening since vacuum vessels were first used at that table. He was glad to be able to say that the employment of these vacuum vessels has been extended to every country. Thermos flasks can now be obtained for 4s., but he confessed to some disappointment that the industry was not localised in England. He had no pecuniary interest in it, but could find no one in England to undertake the manufacture of vacuum vessels. With cheap vacuum vessels their uses would extend. Doctors, for example, would be able to carry to a patient liquid air or oxygen, and render it unnecessary for the patient to go to Switzerland for pure air. It was in that institution that diminished radiation was first used for isolating these substances. By using charcoal in the vacuum the isolation was four times greater. If silica were employed in place of glass the vessels could be used for storing red-hot bodies. Such high-temperature vessels may be of the greatest use in the future, as they can, the lecturer had been informed, be coated with metallic nickel. If the silica vessels will withstand the pressure without leaking, they will be of the greatest use in science. The specific heat of metals was the next subject dealt with, and a pretty demonstration was given of the method of taking these physical measurements. Discs of metal, approximating in size to their atomic weights, were placed alternately in a calorimeter containing liquid air, and the amount of gas given off by each metal was measured in a vessel of coloured water. The quantities indicated by most of the metals employed were approximately similar, but with carbon only a third of the quantity of gas was indicated, showing that it contains very much less heat than the metals. The method is not a perfect one, as any spray or splashing of the liquid would lead to the indication of an excess of heat. It is surprising to know through what a long distance drops of liquid air or hydrogen will fall without being dispersed. To prove this assertion a vessel from which liquid air was dropping at regular intervals was hauled up to the roof of the lecture-theatre, a distance of about 35 ft., and the drops were allowed to fall on a wet blackboard near the floor. This had been tried to a distance of 60 ft. with the same effect. The mobility of liquid hydrogen is a hundred times greater; consequently, very fine drops would carry enormous distances. No great distance was attempted, but an interesting experiment was made through a distance of 8 ft., when the course of the hydrogen was indicated by rings of frozen air, showing as mist. Returning to the question of the specific heat of substances, it was stated that at the temperature of liquid air the diamond has no specific heat, and in like manner the specific heat of magnesium and aluminium disappears at the lowest temperatures now available. The specific heats of gold, platinum, and mercury all disappear at the temperature of boiling helium. This leads to the interesting result of a body being heated without taking in heat, and to the speculation of what will happen at absolute zero to a body which has already no specific heat. Such problems as this have the effect of goading the worker on in his researches with more vigour. The final experiment was the production of vortex rings with liquid air.

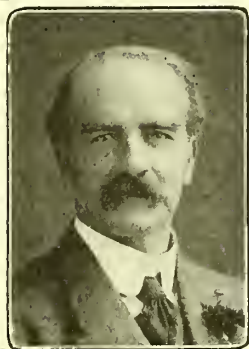
THE imports of chemicals and drugs into Tangier during 1910 amounted in value to 2,689l., against 2,679l. in 1909.

IN the course of the annual report on the trade of Cyprus during 1910-11 it is stated that the rat problem remains unsolved, and this pestilential rodent continues to exasperate the cultivator by his ravages among the carob and other trees. The Agricultural Department has experimented with almost every rat-poison known to science, but those poisons or bacteriological preparations which seem most suitable for use on a large scale are usually prohibitive in price. A bacteriological preparation causing a fatal epidemic among rats and mice, yet harmless to other animals, and obtainable at a price within the reach of the villagers, is what is needed. Failing this, a campaign against rats, with a reward for each tail produced, seems the only practical remedy.

WINTER SESSION.

Association Presidents.

THE Midland Pharmaceutical Association can boast of a long line of distinguished chemists as its Presidents, but



MR. EDWARD CORFIELD

none of these has been more popular than Mr. Edward Corfield, who now holds that office. He was born at Penryn, Cornwall, in 1852, and came to Birmingham in 1867, serving his apprenticeship to his uncle, Charles Corfield, in Bennetts Hill. He qualified in 1878, and became a partner with his uncle in 1885. Mr. Charles Corfield died in 1890, when Mr. Edward Corfield purchased the business, and became the sole proprietor. The business is carried on as Corfield & Corfield as a homœopathic pharmacy, and was established in 1840, the founder being mainly instrumental in establishing the Birmingham Homœopathic Dispensary, which afterwards became the Homœopathic Hospital.

Brief Records.

North East Lancashire and Darwen Associations.—A joint meeting was held at the White Bull Hotel on Tuesday, January 16. Alderman Ralph Shorrocks, J.P., in the chair. There were also present Messrs. R. Lord Gifford, W. H. Grimshaw, R. H. McMyn, J. E. Sherwood, H. T. McCarthy, A. E. Ashworth, B. Holden, A. Lucas, W. J. Wade, Charles A. Critchley, A. J. Espley, John W. Aspinall, D. Yates, Ralph Pickup, A. H. Neath, T. Armistead Ward, Ewart Jepson, H. Butterfield, W. Pickup, Edwin Highton, J. E. Schofield, C. M. Parkinson, George Mercer, and W. Thornber. Mr. W. J. U. Woolcock spoke on the National Insurance Act and the Pharmaceutical Council's scheme for dealing with Section 15 (5), which was approved.

Newport Pharmaceutical Association.—A meeting was held on January 16, Mr. A. Gratte presiding, when Mr. C. Stonelake (who is shortly opening a business in the Channel Islands) read a paper on *Eugenics*. He held that the average quality of the race has depreciated, owing chiefly to the increase in the birth-rate of the unfit, decrease of the fit, bad methods of present-day philanthropy, increased expenses of children, and the tendency of intellectual women not to marry at all. Too much attention is paid to improving the environment, instead of attacking the other problems involved. In the discussion which followed the President and Messrs. E. Davis, D. Lloyd Jones, W. E. Giles, Benson Harries, J. Menhinick, J. Shelley, C. Paine, and A. Badgett took part, and the meeting closed with a vote of thanks to Mr. C. Stonelake.

Society of Chemical Industry.—At the Queen's Hotel, Leeds, on January 22, at a meeting of the Leeds section of the Society of Chemical Industry, Dr. L. L. Lloyd delivered a lecture on "The Action of Sulphur Dioxide upon Oils." He described the colour changes and reactions varying according to the composition of the oil, and pointed out that the same changes and reactions take place with the fatty acids which might be obtained in industrial operations from soaps. The meeting, which was presided over by Mr. C. Rawson (Bradford), also discussed the question of industrial bursaries. The Commissioners of the 1851 Exhibition propose granting sums of money under certain conditions towards the establishing of industrial research scholarships, provided that the local authorities or local sections of the Society of Chemical Industry will give a similar grant per year.

Chemical Society.—The benches in the Society's lecture-theatre at Burlington House, Piccadilly, London, W., were but sparsely filled on January 18, when the President (Professor P. F. Frankland) took the chair. Only two papers were read. The first was by Mr. A. L. Landau on *Phosphorescence*. This was an endeavour to show that photo-thermoluminescent substances, such as alkaline earth sulphides, contain a dissolved metallic element in colloidal form in addition to a colloidal dissolved phosphorogen and a flux. The last-named renders the substances translucent. The other paper was by Mr. F. P. Thole on *Conductivity of Water*. A new glass apparatus for the production of pure water for physical purposes was described and shown. It is cheaper and more compact than the usual form. The

other novel features are provision for boiling off dissolved gases and for expulsion of air from the collecting vessel by a current of steam.

Liverpool Chemists' Association.—A joint-meeting of the Liverpool and Birkenhead Pharmacists was held at the Royal Institution, Colquitt Street, Liverpool, on January 18, to discuss the Federation Scheme of the Pharmaceutical Society and local organisation. Dr. C. Symes occupied the chair, and among those present were Messrs. John A. Stelfox (President, Birkenhead Association), H. Humphreys Jones, E. Prebble, L. Moreton Parry, J. H. Robinson, Harold Wyatt, T. S. Wokes, Harold Lomax, R. G. McDonald (St. Helens), T. Ashworth, Joseph L. Hirst, A. H. Ellithorne, W. A. Wynne, T. Stephen Jones, G. Underwood, R. Simon, P. Grant, J. W. Kendall, W. F. Laycock, W. H. Kendrew, Chas. A. Maries, Ernest A. Rider, G. R. Wadsworth, Ellis K. Fordyce, Prosper H. Marsden, K. M. King, John C. Caine, A. J. Stones, Jas. McIntroy, C. H. Sturt, and G. V. C. Last. Mr. W. J. Uglow Woolcock (London) addressed the meeting, and a unanimous vote was given in favour of the scheme as explained by Mr. Woolcock.

Llandudno and Colwyn Bay Pharmacists' Association.—A meeting was held at the Station Hotel, Llandudno Junction, on January 17. The President (Mr. W. A. Roberts, Llandudno) presided over a large attendance, including Miss Hornblow (Hon. Treasurer), Messrs. Caesar, Gibson, McIntosh, Mercer, and Smith (Llandudno), Hunt, Lloyd, Neill, E. G. Jones and D. Llewelyn Jones (Colwyn Bay), W. Hughes (Conway, Vice-President), Hannah (Old Colwyn), H. Rogers Jones (Llandudno Junction), G. R. Jones, J. Parry, and W. G. Williams (Llanrwst), W. G. Roberts and R. O. Pughe (Llanfairfechan), F. J. Hughes (Penmaenmawr), C. R. Dixon, E. G. Gratton, and G. P. Lawrence (Rhyll), W. J. Jones, J. E. Owen and W. H. Parry (Bangor), Wm. Morris and T. Hughes (Bethesda), H. Jones and Lloyd-Jones (Blaenau Festiniog), Parry, jun. (Betws-y-Coed), Emrys Jones (St. Asaph), J. Carnan and O. Jones (Holywell), James W. Topping (Flint), R. H. Williams (Holyhead), T. E. Hughes (Prestatyn), J. B. Francis (Wrexham), J. H. Jones (Carnarvon), J. E. Jones (Penygroes), Pritchard (Llangefni), Morris (Portmadoc), and C. Pugh Roberts (Criccieth). The President explained that the Association had invited chemists from the surrounding district, and that there were present representatives from five counties—viz., Anglesey, Carnarvonshire, Denbighshire, Flintshire, and Merionethshire. Mr. W. J. Uglow Woolcock, the Local Association Officer of the Pharmaceutical Society, then addressed the meeting on the *National Insurance Act*, in the course of which he gave details of the suggested local committees which are to be in direct touch with headquarters. A vote of thanks was passed to Mr. Woolcock for his address, and the meeting adjourned to tea provided by the Association.

Wrexham Chemists' Association.—A meeting was held at the Imperial Hotel on January 17. There were present Mr. C. G. Caldecott (President), and Messrs. J. Williams (Corwen), E. D. Jones (Llangollen), R. Reeves (Oswestry), J. E. Jones (Cefn), D. Evans (Rhos), T. W. Davies (Caergwrle), and Messrs. James Price, L. B. Rowland, W. F. Harlowe, Lewis Edwards, A. Ll. Francis (Wrexham), and J. B. Francis (Hon. Secretary). Mr. T. J. Roberts, the Mayor of Ruthin, regretting his inability to be present, wrote that he had taken the keenest interest in the *National Insurance Act*, both from an economic and professional standpoint, and was convinced that with concerted action it will usher the dawn of a new era in local pharmacy, although it may not, perhaps, lead to an El Dorado. "I think," continued the letter, "that the scheme outlined by you in the pharmaceutical press recently forms a good basis for initial consideration. I would at the outset urge the necessity of making a bold bid for a strong representation upon the Local Insurance Committees and the District Committees, where the population renders the creation of the latter bodies possible. Pharmacists who are members of approved societies should endeavour to get their societies to nominate them; other pharmacists will, perhaps, be among the deposit contributors, and should canvass for nomination; one-fifth of the total number of the Local Insurance Committees will be appointed by the County Council, here again we ought to get in some representation. I am quite clear that the success of the Bill, from our standpoint, will be in direct ratio to our representation upon these Committees. I shall readily assent to and co-operate in any constructive and progressive course that your meeting may decide upon if its policy will embrace this side of the county." Mr. Uglow Woolcock, the Pharmaceutical Society's Local Association Officer, discussed the Federation Scheme and National Insurance Act for over two hours. The Federation Scheme was unanimously approved of by those present.

Manchester and Salford Pharmaceutical Association.

A joint meeting was held at the Victoria Hotel on Wednesday afternoon, January 17, Mr. G. S. Woolley presiding over an attendance of about forty. The Secretary (Mr. James Grier, M.Sc.) explained the circumstances which had led Mr. J. Rutherford Hill to cancel his engagement to address the Association on January 10, as a result of which the Council of the Association could take no part in the meeting to be held on January 31. Mr. F. W. Bates opened a discussion on the *Shops Act*, and read extracts of sections which affect or are likely to affect pharmacists. Speaking of half-holiday closing-orders for chemists' shops, he asked: Would such closing-order apply to unqualified dealers in drugs; and in applying for such order does the phrase "two-thirds of that class" include businesses of persons other than those of persons, firms, or bodies corporate registered under the 1868 and 1908 Acts? Other points were dealt with, and the generally expressed wish of the meeting was in favour of closing one half-day per week, which in the centre of the town might be Saturday, but outside that area Wednesday. The *Insurance Act* was then taken up. On the motion of the Chairman, seconded and supported by Messrs. Kidd and Blackburn, Mr. Harry Kemp was unanimously appointed to represent the Association on the General Provisional Committee of the Pharmaceutical Council, which is to deal with details in connection with the administration of the *Insurance Act*. Mr. Councillor Jones, protested against the specific mention of Boots Cash Chemists, Ltd., in this connection as a gratuitous advertisement, and thought they could have been included in a general way under drug companies. Reprints of the medical benefit section of the *Act* supplied by THE CHEMIST AND DRUGGIST were distributed, and assisted those present in following the points raised. The Chairman opened the discussion, which was concentrated on Section 15 (5), and was carried on by Messrs. Simmins, Jones, Lewis, Mallinson, Blackburn, Kemp, Bates, and others. The Chairman said that chemists should be prepared to protest against dispensing at unreasonable prices, and make their protest felt. Mr. Simmins said the Insurance Commissioners may appoint chemists upon the local committees, and should be approached with a view to getting representation on such committees. Mr. Blackburn said there seemed, to his mind, a danger that co-operative and friendly societies would start depôts and employ the three-year dispensers mentioned at the end of Sub-section 5 (3), to the detriment of the qualified pharmacists. Mr. Kemp pointed out that the number of such men is necessarily limited, and must tend to grow smaller; besides, as he read it, the arrangements for dispensing can only be made with persons, firms, etc., registered under the Pharmacy Acts, and *these are to undertake* that the dispensing shall be done (a) by a qualified pharmacist, or (b) under his supervision—*c.g.*, by an unqualified junior—or (c) by a dispenser with three years' experience prior to the passing of the *Act*, and who presumably will be acting as an assistant to a qualified pharmacist. With former experience of the fact that "person" does not include a company, one almost wonders if "persons" will fare any better in connection with friendly societies. One feels tempted to suggest that Sub-section 5 (3) might read "shall prohibit the making of arrangements for the dispensing of medicines, *except with persons, firms, etc., registered under the Pharmacy Acts, 1868 and 1908.*"

Festivities.

Whist-drives.—Following the custom observed for several years, the Bath Pharmaceutical Association's January meeting took the form of a whist-drive, which was held at "Forth's," in Milson Street, on the evening of January 18. Between fifty and sixty persons were present and spent a very enjoyable evening's amusement. Mr. Luther Wilson (President) acted as M.C. The prize-winners were: *Ladies*—(1) Mrs. D. A. Evans, (2) Mrs. W. J. Sourway. *Gentlemen*—(1) Mr. Lewey, (2) Mr. F. Sare. The consolation prizes were awarded to Miss Ponsford and Miss Wiggin (who played as gentlemen).—Though not so well attended as usual, the annual whist-drive and supper of the Midland Pharmaceutical Association, which was held at the Grand Hotel, Birmingham, on January 17, was a success. The date clashed with the Lord Mayor's ball, and this, combined with the bad weather, kept many away. Among those present were Mr. Edward Corfield (President) and Messrs. J. A. Radford and H. W. Tranmer (Vice-Presidents), Mr. and Mrs. Lowther, Mr. and Mrs. Hill, Mr. and Mrs. Mann, Mr. and Mrs. H. Buckingham, Miss Radford, and Messrs. C. V. Thompson, A. W. Southall, A. Prosser, Smith, and H. O. Lloyd. The prizes, which were distributed by Mrs. H. Buckingham, wife of the Hon. Secretary, included a case of silver coffee-spoons given by the President, as the first ladies' prize. The prizewinners were: *Ladies*—(1) Mrs. W. R. W. Booth, (2) Mrs. F. Smith (Handsworth), (3) Miss Radford. *Gentlemen*—(1) Mr. H. M. Tranmer, (2) Mr. C. V.

Thompson, (3) Mr. H. O. Lloyd.—A whist-drive in connection with the Bournemouth Pharmaceutical Association was held at Gervis Hall on January 19, and proved a most successful event. There were 104 players, and Mr. J. H. Scampton (President) officiated as M.C. At the close Mrs. Scampton presented the prizes: *Ladies*—(1) Miss A. Hutton, (2) Mrs. H. R. M. Harvey, (3) Miss Rye, (4) Miss M. Williams. *Gentlemen*—(1) Mr. H. Alsford, (2) Mr. E. J. Hartshorn, (3) Mr. F. E. Bilson, (4) Mr. McGill. Special prize for lady playing as gentleman, Miss Cole.

PRESCRIPTION PROBLEM.

THE problem which was set in our issue of October 7 came to us from Tasmania, and is probably one of the most difficult that has appeared in this series. The awards were delayed, and we have now received from Tasmania a correct answer to the problem. The reading is as follows:

Pot. chlor. ʒj
Syr Aurant ʒss
Mist La Grippe ad ʒij

ʒss 4 h. s. in sugar & water.

The postcards sent in have not been lacking in suggestions. The first ingredient (pot. chlor.) was only given correctly in a few cases, other replies giving pot. citrat., pot. carb., pot. iodi, and p. amm. carb. The syr. aurant. was rendered sp. ammon., sp. ammon. co., and sp. anisi in some cases; and the third ingredient proved insurmountable—it was variously given as muc. trag., muc. sassafras, menth. pip., mist. tuss, etc. No competitor was correct, so no award is made.

The response to the problem in the *C. & D.*, December 23, index folio 917, was not only good, but the proportion of correct replies was above the average. The difficulty in the script turned upon the miss-spelling of the word ichthyol, but no fewer than forty-five competitors sent in a clean solution. The following is the proper reading:

R Pasta Ichthiol [Ichthyol] ʒiv
10 p.c.

To be painted on night and morning.

R Camel Hair Brush.

Correct replies were first received from the following: Mr. A. J. Fairley, 71 Lavender Hill, London, S.W.; Mr. J. W. Hatch, 179 Queen Victoria Street, E.C.; Mr. A. D. Matthews, c/o Messrs. Alsop & Quiller, 137 Sloane Street, S.W.; Mr. R. E. Speichly, 4 Marchmont Street, W.C.; Mr. E. A. Swindells, 50a George Street, Croydon; Mr. Wilfred N. Beck, Victoria Pharmacy, Burgess Hill; Mr. M. Wood, c/o Messrs. Nicholson, 18 The Pantiles, Tunbridge Wells; Mr. W. Dennis, 16 Cecil Square, Margate; Mr. L. D. Pratt, c/o Messrs. Geo. Beall & Son, Cambridge; Mr. H. E. Chapman, Parade Pharmacy, Southborough. Tunbridge Wells; Mr. R. H. Collins, 36 St. Peter's Street, Bedford; Mr. F. T. Chapman, Winterton, Lincs; Mr. E. M. Mellor, Market Place, Uttoxeter; and Mr. H. P. Knowles, West Riding Asylum, Wakefield.

To each of these we are sending a copy of "The Chemists' Medical Dictionary." The problem given herewith is one which we should like subscribers, their assistants and apprentices to tackle. The form of the prescription is unusual, and although the caligraphy is cramped and indistinct, we do not despair of getting a good response. The prescription is the size of the original. Prizes will be awarded at the discretion of the Editor.

Handwritten:
Gellie ʒss
Ichthiol ʒiv
Syr Aurant ʒss
Mist La Grippe ad ʒij
ʒss 4 h. s. in sugar & water

A Pharmacist's Holiday.

Mr. G. Claridge Druce, M.A., Ph.C., etc., while wintering in Madeira studied the flora of Funchal, which he described in a previous article; then he visited the Azores, San Miguel and its flora being first dealt with; and the flora of Furnas is now graphically recalled.

OUR next expedition was to Furnas, twenty-seven miles from Ponta Delgada, and a fascinatingly interesting drive it was, passing at ten miles the town of Ribeira Grande, which has suffered in past times greatly from earthquakes. Near here were the tea plantations and the sugar factory. Then hedges of hydrangeas bordered the road at intervals with the flowers, usually of a bluish tint, although a few were of the normal pink hue—probably the presence of iron in the soil causes the blue colour. We had lunch in a beautiful fern-shaded spot where *Woodwardia* and *Dicksonia Calcita* luxuriated and the native ivy, *Hedera canariensis* var. *azorica*, grew. The Australian wattle has been introduced, and it was curious to see that and the Japanese *Cryptomeria* taking the place of the aboriginal pine and holly. We then gradually climbed up to a moorland, reminding us at once of a Cingalese patanas and a Highland moor. Here the shrubby *Myrsine africana* var. *retusa*, DC., was growing, with its purple berries, covered with glaucous bloom, looking temptingly edible, but which, as a boy with too graphic pantomimic gestures showed, would not have pleasant after-effects. Here, too, was *Erica azorica*. Then we



FURNAS IN THE AZORES.

suddenly, by a road cut through the lip of the crater (Furnas is an extinct volcano), had a glorious view of this most picturesque and interesting place. The bottom is four miles long by three broad, and it is situated about 600 ft. above sea-level and 300 or 400 ft. below the crater's rim. The surface is by no means even; part of it is taken up with a fresh-water lake of considerable beauty, from which a spring flows through the village of 2,000 people who live in this sheltered Vale of Avalon. The inn we came to was quite primitive, but we noticed wire-gauze covers were used to put over anything eatable, although in February that worst of the Egyptian plagues had not arrived. But we were too eager to see the chief sight of Furnas to worry about the hotel, so rushed out down the village street to where the stream from the lake flows under the bridge. Its sides were bordered with white azaleas in full flower, ten or twelve feet high. Avenues of camellias were near. Its banks were covered with the creeping *Ficus repens* from India, and we followed its easterly course till we came to some concretionary rocks bordering the road, where the maidenhair fern, *Adiantum Capillus-Veneris*, the beautiful club-moss, *Lycopodium cernuum* (which we last had seen used as an ornament in the railway station at Hatton to welcome the Governor of Ceylon), and *Equisetum ramosissimum* grew. On the walls, too, we saw *Tillaea muscosa*, while the Eastern *Seycesteria formosa* was quite

naturalised, and we saw the British Royal fern, *Osmunda regalis*. Then we saw the white cloud of steam rising above the celebrated geyser, which is close by the road, a wall 6 or 8 ft. high surrounding it; but through an opening one could see the boiling water continually being thrown up in a great turmoil, the surplus escaping down the side of a cliff in steaming plenty to mingle with the stream from the lake. By the side of this, in rich mud,



AZALEAS AT FURNAS.

is grown the Tara, *Colocasia antiquorum*, so largely used by the inhabitants of Furnas for food, especially during Lent. Near the great geyser the roadway here and there "steams," and by scraping a little hole with one's umbrella a small cavity through which the steam whistled was made. In this the steam condensed and then one had made a miniature geyser, for the liquid mud was ejected and the greater part falling back again into the funnel was again thrown out. Sulphur encrustations were frequent, and then one came to a space by the road where the whole mass was in rapid ebullition, sulphur fumes given off in plenty and condensed sulphur covering the road-wall.

Still another geyser, the Caldeira de Pedro Botellio, situated at the foot of a small hill, has an opening about a yard in diameter. This geyser has a rhythmic beat, like a marine engine, and slaty-blue mud is thrown out



THE GEYSERS AT FURNAS.

with a constant rumbling noise. It was very remarkable to see growing quite near our heather, *Calluna vulgaris*, with its foliage encrusted with the mud thrown out by this Plutonic agency. Another geyser lower down the valley is used by the inhabitants to soak the osiers in for basket-work, the immersion being sufficient to allow them easily to be peeled, but the refuse did not add to the

beauty of the scene. We also saw cooking done in one of them. A small boy with great gusto showed us one spring of hot but potable water; quite close to it was an ice-cold fount, and another was sweetly acidulous—a natural lemonade. Then we were conducted by him to some natural alum, and next went to the thermal establishment belonging to the Municipality of Provoçao, which has deservedly a high reputation. In the great bath-house are numerous marble baths, each with its small private toilet-room, which are free to visitors. These are supplied with natural hot water. Some springs are rather strongly alkaline, others are sulphurous, and one an acidulous ferruginous water, which was deliciously comfortable, as if one were bathing in treacle, but without its stickiness. I found them so attractive that I bathed morning, noon, and night, and if it had not been for the flowers outside I should probably have spent my whole time there. As I tossed on my hard bed I longed to be in them. The bathing was fascinatingly exciting; as the water cooled down one could knock upon the metal tap and say, "Hullo, Pluto, are you there?" and then turn on the hot stream from Nature's fount at will. The effect of the baths was decidedly exhilarating and they are of real curative value in rheumatism. As one saw the great ebullition of gas from the collecting ground of some of the waters one felt how much helium was going away into space. The analysis of Eau de la Caldeira grande gave:

Silice et alumini	0.243
Sulfate de soude	0.187
Hydrochlorat de soude	0.937
Sous carbonate de soude	1.072

Temp., 95 Cent.

An analysis of the gas given off from the Caldeira grande gave:

Acid carbonique	988.90
Acid sulphhydrique	9.50
Azote	1.46
Oxygene	0.14

1000.00

A litre of the water from the same source evaporated gave a solid residue of 1.818 gram. An analysis of this residue gave:

		Suggested Composition.	
Acid carbonique ...	293	Carbonate of sodium ...	707
Acid sulfurique ...	19	Sulphate of sodium ...	25
Acid chlorhydrique ...	401	Sulphate of potassium ...	16
Acid sulphhydrique ...	26	Chloride of sodium ...	646
Silice ...	299	Sulphide of sodium ...	64
Soude ...	329	Silica ...	285
Potasse ...	8	Silicate of sodium ...	24
1875		1767	

SOURCE DE PADRE JOSÉ.—Gives 7 litres a minute at a temperature of 51° C. A litre gave off 102 cm. of gas: carbonic acid 86.3, nitrogen 12, oxygen 1.7. Another promising source of helium.

SOURCE DE PEDRO BOTELLER.—The slaty-blue mud geyser is, as one might expect, strongly silicious. A litre of the liquid yielded 1.003 gram. Of the residue 300 was silica, 651 sulphate of soda, 87 alum, and 34 gypsum.

SOURCE DE L'AGUA AZEDA.—Gives 57 litres a minute of a carbonated water at a temperature of 16° C. A litre gave off 939 c.c. of gas, made up of carbonic acid 890, nitrogen 35, and oxygen 5. The nitrogen here also gave promise of being a source of helium.

EAU DOUCE DE L'HÔPITAL.—A litre of this gave off 22 cm., of which 54.5 per cent. was carbonic acid, 31.9 nitrogen, and 13.6 oxygen. The records of treatment in the baths show that rheumatic cases are in most instances relieved and in many cured, but that the vaunted power of cure in locomotor ataxy or paralysis has not been proved. Several forms of skin eruptions have also greatly benefited.

FORMOSAN LINALOE OIL.—The Formosan Government has recently granted a licence to the Mitsui Bussan Kaisha to engage in the production of linaloe oil in Formosa. The oil is now principally distilled in Mexico and Venezuela. The term granted to the Mitsui Bussan Kaisha will expire March 31, 1912, but it is expected that about 300 kilos. will be produced during that period.

AT THE COUNTER.

A SHANGHAI chemist's customer handed in a prescription as follows:

R Cod-liver oil emulsion 200.00

and asked if he could get less, as he did not care to buy \$200.00 worth.

"Do you keep Dr. Tibb's Vile Cocoa, and how much a tin is it?" A Whitehaven chemist had to answer this question.

On the front of a picture-postcard, Mr. G. A. Barnes, London Drug Stores, Newton Abbot, recently received the following order:

Sir Please will you let me have something for my boy 6 yrs next birthday he is breaking out and he get very thin and he very hot and he little stones oilt of order and he got the worm all day

Mr. Barnes says: "A little Sherlock Holmes' deduction brought me to the conclusion that a dose of castor oil and a worm-powder were what was required—at any rate, 'he better.'"

The following sketch by the late Fred Reynolds was sent about a dozen years ago to his friend, Mr. Newton Spyer, of Messrs. Bash & Co., Foley Street, W. Mr. Reynolds said at the time that it might be sent to the Editor of THE CHEMIST AND DRUGGIST:



Customer: "A nounce of carbonate of soda, a nounce of tartaric acid, and a nounce of cream of tartar, carbonised."

Chemist: "Carbonised!"

Customer: "Yes, carbonised. Don't you know what I mean—dried."

Chemist: "Dried and carbonised are two very different things."

Customer: "No they ain't."

Chemist: "Well, If you want them 'carbonised,' kindly call to-morrow, and we'll get it done for you."

Customer: "Oh, you can keep 'em then." (Exit hurriedly.)

Cremules.

Sir James Sawyer's brilliant proposal to utilise "chocolate-cream" as a vehicle for the exhibition of medicaments suggests an interesting series of new preparations, and the following notes are intended to point out the best method of procedure and save dispensers the time and worry of individually finding out what to do and how to do it.

WITH all respect to Sir James Sawyer, we must question the description of the method of preparation of ordinary chocolate-creams which he gives. The method described suggests that these dainties are of the nature of capsules, whereas they are more nearly akin to the soft gelatin-coated pill. That is to say, the cream or centre portion is made first and the chocolate coating then applied, on the large scale by intricate machinery, which works with a precision which is most fascinating and almost uncanny.

Very presentable creams can, however, be turned out by any neat dispenser without the aid of special apparatus. The first step is the preparation of a quantity of "cream," which generally belies its name by containing neither milk nor cream. These ingredients are unnecessary, as without them we are able to provide what is required—i.e., a smooth, slowly soluble paste of pleasant taste. Briefly the manipulation is as follows:

Take

Pure cane-sugar	...	...	1 lb.
Glucose (syrupy)	...	...	$\frac{1}{4}$ lb.
Water	...	...	a sufficiency to dissolve

Boil this solution until the temperature reaches 240° F. Pour out on a clean and damp ointment-slab, and leave until nearly cold. Then work it with a spatula as if it were an ointment until the transparent syrup has changed to a smooth white cream. It is advisable to knead it with the hands to ensure smoothness and freedom from lumps.

This is the basis of our cremules, and what is not required for immediate use may be stored in a covered pot. If a damp cloth be placed on top of the cream it will keep good almost indefinitely.

Those who are familiar with pills and suppositories will have no difficulty in preparing medicated creams, as the manipulation is practically identical. The medicaments are incorporated either by trituration in a mortar exactly as if it were a pill-mass, or the cream may be melted at a low temperature and the other ingredients stirred in. Commercially, the creams are formed by being run into depressions made by plaster-of-Paris moulds in trays filled with powdered starch in the same way as the familiar pastilles are moulded. Unless the pharmacist means to make a speciality of some particular cremule, it is unnecessary to have them moulded as the soft plastic medicated cream can be quite easily divided into pieces of the required weight—30 to 90 grains—according to the amount and character of medication. These pieces can be roughly formed by hand into any of the usual shapes. Mathematical uniformity of shape is not at all necessary. If the creams have been moulded in starch they require a few hours to cool and set, are brushed with a soft brush to remove adhering starch, and are then ready for coating. The coating mixture has the following composition:

Pure chocolate	...	...	5 parts
Powdered sugar	...	...	3 parts

The chocolate, which may be obtained in blocks from the lozenge-makers, is pounded in a warm mortar until reduced to a smooth paste, and the sugar gradually incorporated, with constant trituration until a smooth mixture results. This mixture requires plenty of hard rubbing, and should be tested for smoothness in the mouth.

The chocolate should melt away gradually and evenly, and when this condition is reached it is ready for use. It may be flavoured, if desired, with a trace of vanillin dissolved in spirit. A sufficient quantity of this sweetened chocolate is melted in a water-bath; an ointment-pot in a pan of warm water is more suitable than a shallow vessel. Into this the medicated creams are dropped three or four at a time. After a moment they are removed singly with a fork or long-handled spoon and dropped on waxed paper, then put in a cool place to harden. They require careful

handling, and should be dispensed in shallow capsule or cachet boxes, preferably each in a small soufflée case. If carefully manipulated the finished chocolates will be similar in appearance to the more expensive varieties sold in the best shops. As a matter of fact, they have been produced by practically the same process. Before attempting the preparation of cremules it is advisable to critically examine an assorted lot of the confectioner's chocolates. These will suggest many possible variations in the consistency of cream, which varies with the temperature to which it is boiled, colour, and flavouring. A consideration of these points will enable the pharmacist to construct formulæ which will be satisfying to the physician and pleasant to the patient.

The following are examples of approved formulæ:

CREMULA MORPHINÆ.

Morphinæ hydrochlor.	...	...	gr. $\frac{1}{5}$
"Cream"	...	...	5ss.

To make one cremule.

Flavour with a trace of vanilla or lemon essence; a very small quantity of flavouring is required. Apomorphine, cocaine, heroin, codeine, and the like in small doses may be similarly treated.

CREMULA ANTISEPTIC. FORT.

Sodii bibor.	...	...	gr. ij.
Thymol.	...	...	gr. $\frac{1}{5}$
Ol. cinnamon.	...	...	\text{m_ss
"Cream"	...	...	3j.
S.V.R.	...	q.s. (to dissolve the thymol.)	

This is a powerful antiseptic, useful in catarrhal conditions.

CREMULA MENTHOL. ET EUCALYPT.

Menthol.	...	...	gr. $\frac{1}{10}$
Ol. eucalypt.	...	...	\text{m_ss .
Ol. limonis	...	...	\text{m_ss
"Cream"	...	...	3j.

Cocaine gr. $\frac{1}{10}$ or heroin gr. $\frac{1}{10}$ may be combined if required.

CREMULA MORPHINÆ ET IPECACUANHÆ.

Ext. ipecac. liq.	...	...	\text{m_ss .
Morphinæ hydrochlor.	...	...	gr. $\frac{1}{4}$
Ol. anisi	...	...	\text{m_ss .
"Cream"	...	...	gr. XLV.

CREMULA AMMONII CHLORIDI.

Ammon. chlor.	...	...	gr. iij.
Ext. glycyrrh.	...	...	gr. x.
"Cream"	...	...	3ijss.

Soften the ext. glycyrrh. by heat, and incorporate the cream.

Although not strictly pertaining to our subject, the following may be usefully mentioned here:

LAXATIVE FRUIT CREMULES.

Tamarind pulp	...	...	10 parts
Powdered senna	...	...	3 parts
Sugar	...	...	5 parts
Wheat starch	...	...	1 part

Mix in a water-bath and divide into pieces of about 40 grains each and coat with chocolate. This forms the "Hindu dates" of the Austrian Pharmacopœia, and is improved by the addition of a little oil of coriander.

A similar preparation may be made by preparing confect. sennæ B.P. stiff enough to be divided into pieces and chocolate-coating each dose. The writer did this once at the request of a physician, who wished a gentle laxative for a fastidious patient. When asked later if they suited, the doctor smiled and said they were so nice he had eaten the lot himself. A more modern "fruit" preparation is made on the following lines:

Phenolphthalein	...	...	gr. j.
Potass. acid. tart.	...	...	gr. j.
Ol. aurant.	...	...	q.s.
"Cream"	...	...	3ij.

With these as models the practical pharmacist may compound many other preparations, either to meet the requirements of local doctors or to foster retail business.

MANY A STRENUOUS ARGUMENT with a customer might be saved if, when a child or messenger is sent to purchase anything, the price were legibly marked on the package. Occasionally this is omitted, and buyer and seller are both sufferers.

Employers I Have Met.

By a Nomad-Chemist.

LACK of capital, love of freedom, and, possibly, commercial cowardice have caused me to remain an employé all my days; and as apprentice, junior, senior, manager, and locum I have come in contact with many types of employers. Let me rapidly delineate a few types, for some of them are passing away never to return, and the others may not linger long in these days of serious medication and serious legislation. Do you recognise this ornament of our semi-profession?

The Dispensing Chemist.

He scorns trade; he is a professional man. Wherefore he prefers wire blinds in his window, with possibly two coloured carboys, and, as a concession to the commercialism of the age, a case of sponges at impossible prices

in the darkest corner of the pharmacy. He asks 1s. 1½d. for his patents, and refuses to take less; he would rather direct the customer to the nearest store, with a mighty condescension in his bearing—and mighty little cash in his till. Certainly the business that he *does* do shows nearly 60 per cent. profit (which is low enough for a "professional" man!), and he is saved from the fret of competition and the strain of overwork.

"Has been known to keep a customer waiting three minutes while he pointed out the beauty of oxalate crystals to the apprentice."

He would prefer to do nothing beyond dispensing and perhaps a little analysis; he dotes upon his microscope, and has been known to keep a customer waiting three minutes while he pointed out the beauty of oxalate crystals to the apprentice. He is willing to accept apprentices, and actually considers it his duty to teach them something; he questions them with regard to their B.P. regularly in the lull of the afternoon's dispensing; he induces them to attend science classes, and gives time for that purpose, and even takes them off for a botanising expedition when occasion offers. Added to which he supervises their morals, and telegraphs his congratulations on their passing their Minor, imploring them to tackle their Major.

The Dashing Director.

The Dispensing Chemist of the old school is passing away, and his placid benign features beneath their skull-

cap are more often replaced by the alert, well-groomed specimen of our calling whom I designate the Dashing Director. It may be that he is the son of such a chemist as I have just sketched, and, building on the sound foundation laid by his father, he has constructed a modern business on up-to-date lines. Possibly he has started with a good speciality skilfully advertised; certainly he has only reached his position by pluck, energy, and "gumption." Needing more capital to extend the ramifications of his rapidly growing concern, he has converted it into a small private limited company, himself the Managing Director.



"He bustles across the shop to his private office."

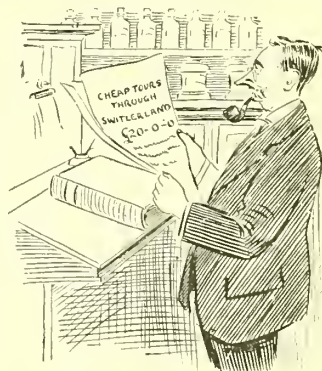
He drives to business from the suburb each morning, arriving sharp at 10 o'clock, and bustles across the shop to his private office, looking smart and dapper, and with a pomade-hongroise expression on his alert face. The actual minor details of business are relegated to a manager, a senior assistant, or perhaps a very junior partner; but the Dashing Director has his hands upon the reins, and very soon knows when any of his team are running slack—as slackers soon discover. He may have one weakness—he is constantly "making improvements," and petty building operations are a permanent feature of the premises. One red-letter day—you will always remember it—he invited you to spend the Sunday at his suburban residence, and in the afternoon he took you for a walk across the downs, and recounted to you the successive steps by which he rose to his present position. (You realise with a shock that he too has been a mere assistant like yourself.) You have been enchanted by his story of success, and build castles in the air for yourself; but on Monday morning, when your tailor's bill arrives, you come to the conclusion that it is only given to the moneyed few to attain such giddy heights of commercial fame as have been reached by the Dashing Director.

The Average Chemist.

He has been an assistant in a certain growing town, and sees possibilities of an opening in the suburbs, or else he has prospected half England to find a safe investment for the 500%. he has acquired by careful saving—in whatever way it is, lo! here is our assistant launched on the tumultuous seas of proprietorship; and you may find him for the next few years in his little pharmacy or store wherein he thinks, lives, moves, and sometimes smokes after shop hours.

He cannot afford to keep an assistant, at least at the start, and tries to manage with an apprentice or a superior errand-boy (who may eventually swell the ranks of the great unqualified).

Every evening, if not too tired, he takes his constitutional, and returns to find a customer, perhaps, fretting for a pound of linseed meal, or wanting to be obliged with a penny stamp. At the end of two years' grind, maybe, he decides to take a holiday, and you are engaged as "locum tenens." When you arrive, and he has assured himself that you are not likely to burn down his shop in his absence, or poison all his customers, or imbibe too freely of the strong liquor of the adjacent hotel, or set up a rival concern next door on his return—when he realises that you may be trusted, then he is like a schoolboy let loose for a holiday. It is only as the minute of his departure arrives that his fears overwhelm him: you are to be sure to dispense Mrs. Smith's mixture with the strong peppermint-water, and make Mrs. Jones's pills oval, not round, and let Miss Robinson have liquorice powder from the stock in the Drug Room, and send the boy to 5 Ellen's Place on Friday, and let the shop be washed on Monday before 10 o'clock, and—Tenderly you coax him into the waiting cab, assuring him that all will go well in his absence. You mentally resolve as he departs that you will never face the racket of a small city business.

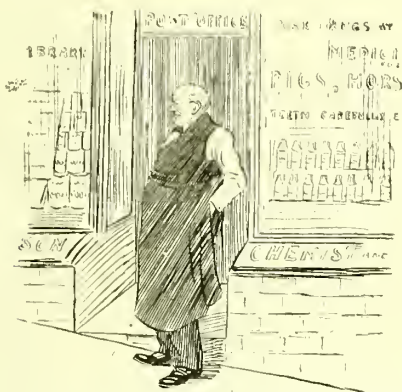


"He decides to take a holiday."

The Country Chemist and Druggist.

He is the leading man of the little country town, and he may be a magistrate, and hold other important post—postmaster, indeed! Probably he sells pipes and tobacco, and newspapers and picture postcards, and lends books, and draws teeth, and makes pig-powders. But he is no slave of the public; he is a celebrity of some importance in the neighbourhood, and if he goes off on other business, his customers patiently wait his pleasure, and do not

suggest the existence of a law that makes it illegal for a chemist to desert his shop till he dies. He may be a bachelor, but that is entirely his own fault, as he is most eligible, and even "gentry" are known to treat him with great respect. If he is married, his wife probably regulates the fashions of the tradesfolk, and his daughter, when of marriageable age, is much sought after as being highly respectable and likely to inherit "her father's



"He is a celebrity of some importance in the neighbourhood."

money" (always the Country Chemist has to live up to his monetary reputation). Possibly there is a son who is to take the business later on, but too often he is lured by the fancied greater attractions of the city, and delays his return for an inordinate time; quite often the Country Chemist makes his son a dentist or a doctor, if brains and funds are available. The Country Chemist and Druggist is a stable institution, and long may he amble on his happy way!

The Prescribing Chemist.

In another twelve months his doom may be sealed by Act of Parliament—as may be also threatened the existence of the dispensing doctor—so let us get a look at him before he leaves the stage. He is, preferably, bald and married, and lives in a working-class neighbourhood, and can cure anything from thrush to angina pectoris (he has, at least, got into the habit of believing he can). He studies medical books, and keeps himself aloof from local

society: he is a being apart, a present-day survival of the magician and the alchemist.

You are engaged as his locum, and he impresses you with the awful responsibility you have taken upon your shoulders, and entreats you to keep the secret of his absence as long as you possibly can. You are kept hidden behind the dispensing-screen till the very moment of his departure, when he dives into a cab and huddles into the darkest corner; his wife or

children having set out secretly round the corner of the next street, and the errand-boy having taken the luggage on some trucks covered with sacking. You soon get an idea of the "awful responsibilities." No sooner has he fled into the cab (drawn up opposite the next shop down the street) than a woman enters with a small parcel that you surmise may be a baby. There is a stern, half-suspicious, demand for "The Doctor"; and your attempts to look paternal and interested in the smudgy item in her arms are met with cold aversion. She informs you that

she has brought up ten children, "an' none of 'em 'as 'ad a doctor 'cept Dr. Prescriber [you guess the Doctor's degree was taken in the School of Experience, and is an honorary mark of distinction conferred by local authorities], an', what's more, I don't intend to 'ave anyone else but the Doctor." You tell her you admire her choice of medical adviser, and suggest very delicately that you are prepared to do your little best for her darling child; but as you approach the smudgy item, you are shoof'd off: she wouldn't have anyone but Dr. Prescriber touch her Adolphus (meaning the smudgy item), she had had ten children, and when 'Erbert had measles, and Mary had collywobbles, and Selina had twitchings, and Jack had to have his curls cut off because—

You stay the torrent of words by thrusting a teething-powder into the voluble one's hands, demand a penny, and request her to bring the smudgy item on the morrow if it is no better. She goes out sniffing about "ten children," and a labourer enters saying he wants "some of that ointment of yours." With pardonable pride, you realise that he takes you for the famous "Doctor," and you listen as he describes what your celebrated salve has done for his mate: will it be equally good for him? You request "my man" to step behind the dispensing-screen, examine his wound with professional interest, and meanwhile let your eye rove round for a likely jar of ointment.

By the time the Prescribing Chemist has returned, you are in the last stage of irritation: no one will take your advice, they will have "the Doctor." You depart with his words ringing in your ears. Secretly he is rather pleased that the returns have gone down to practically nil; it is a tribute to his great reputation. He notices that your nerves seem upset; he should suggest ten-minim doses of nux, one-drachm doses of bark, and just a little something to touch the liver, say, five minims of— You have fled.

The Historic Chymist.

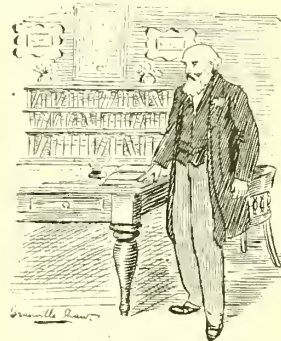
Only a few specimens remain, and their place will not be filled by the same type of man. Let me recall one whom I had the honour to meet. He was the senior partner of a famous firm, long established. His years were eighty, and yet each morning we saw him pass through the pharmacy to his office; indeed, there is a legend that the clocks were regulated by his arrival. He was always neatly dressed in tightly buttoned frock-coat and silk hat, which latter was invariably doffed should he meet either of his assistants in the street. He daily visited the dispensary to swill his hands before departing homewards, and had a kind smile for all and sundry. Otherwise

we saw little of him: he was buried in weighty matters in the seclusion of his office, which we only visited once a month to receive our salary. I well remember my first visit to that office; he gave me very practical advice as to my lodgings (I was new to London life then), and concluded with a hope that I should be "very happy here, and hereafter." Which I was, considering the rigorous dispensing experience I underwent, and was sorry when my health demanded a change. I remember my farewell to this courteous old-world Chymist: he spoke as man to man, pointing out a few essentials, and remarking that all the rest was "dust and ashes—dust and ashes."

The Modern Pharmacist.

So new a creation is he that I hesitate to portray him; he is not yet matured, so that I can definitely refuse to place a type before you. I dream of him, and I think I can see a good future for the Modern Pharmacist—a future when the doctor who dispenses will exist no more, when the public will prefer good quality to bad quantity, and the chemist will be earning something better than a huckster's pence.

A.S.G.



"He gave me very practical advice."



"He should suggest ten minim doses of nux... and just a little something to touch the liver."

JAPANESE IMPORTS AND EXPORTS.

A Tabular Statement from Official Sources of the Business in Chemicals, Drugs, and Allied Produce during the first half of 1911 and the corresponding periods of the previous two years.

IMPORTS.

	June, 1911	Six months ending June		
		1909	1910	1911
Soya beans piculs	327,463	2,217,393	1,594,882	2,265,485
Sesame seed "	15,431	37,359	41,328	49,262
Rape seed "	7,609	4,678	22,573	38,206
Cotton seed "	4,623	62,701	85,928	89,135
Linseed "	—	—	—	11,161
Other seeds yen	62,879	136,667	139,318	539,048
Pepper kin	1,908	16,616	8,170	15,659
Curry powder "	1,000	9,453	14,125	9,287
Condensed milk doz	89,783	446,464	389,077	409,871
Milk-sugar kin	1,091	2,650	3,273	10,393
Hops "	136	139,269	121,402	172,306
Liquorice "	23,654	273,208	335,768	292,473
Saffron "	106	1,229	1,285	760
Ipecacuanha-root "	151	2,116	1,814	1,587
Cinchona "	—	45,934	22,513	21,806
Rhubarb "	6,903	57,217	79,400	52,678
Senega "	5,465	30,588	11,335	39,962
Musk momme	—	3,090	—	7,005
Musk (artificial) "	242	21,938	10,286	2,179
Cloves kin	3,844	45,265	34,224	24,333
Aloes Wood "	1,169	7,669	12,166	5,301
Iosin "	336,150	2,012,574	1,993,598	2,596,063
Catechu and gambier "	56,929	622,753	427,887	477,671
Gum acacia "	1,042	187,770	87,372	48,728
Shellac "	4,388	77,123	76,395	90,506
Glue "	206,113	896,804	843,536	940,010
Gelatin "	3,359	81,716	68,117	36,906
Phosphorus, red "	14,598	166,089	144,900	164,316
Phosphorus, yellow "	14,815	128,581	123,835	107,341
Acids—				
boric "	65,201	333,511	240,579	346,898
acetic "	4,168	475,506	137,542	20,340
tartric "	13,057	84,311	130,033	62,999
salicylic "	33,210	172,438	216,683	109,765
carbolic "	68,347	364,042	491,657	312,112
citric "	2,513	21,781	16,596	26,229
tannic "	1,694	3,894	12,369	2,117
Soda—				
caustic "	1,709,140	9,217,375	10,025,310	10,035,775
ash "	3,580,851	15,106,411	16,019,182	17,797,735
bicarb. "	2,076,892	3,620,717	2,523,650	4,407,767
nitrate (crude) "	335,860	4,133,065	11,116,244	24,658,731
borate "	22,554	492,569	505,899	368,385
salicylate "	1,270	3,979	18,207	11,850
Potash—				
chlorate "	460,653	3,694,061	3,475,311	3,080,813
cyanide "	53,758	291,699	383,467	354,414
bichromate "	26,297	369,968	341,721	267,079
bromide "	1,693	48,013	48,751	5,386
Magnes. carb. "	9,737	145,874	139,060	83,346
Alum. "	104,537	186,268	218,791	452,279
Bismuth subnit. "	6,804	17,539	37,728	19,063
Ammonia sulph. "	13,921,748	15,681,349	60,371,570	59,858,383
carb. "	28,366	186,334	163,512	155,471
Formalin "	5,984	445,156	448,425	567,559
Glycerin "	43,379	462,428	407,540	541,459
Saccharin, etc. "	—	—	—	—
Camphor (Bornco) "	10,482	6,625	10,559	33,519
Acetanilide "	6,707	36,597	48,024	44,364
Antipyrin "	186,279	419,500	463,520	426,087
Santonin kin	—	4,552	2,009	958
Quinine salts oz.	93,132	47,300	111,531	205,939
Morphine salts "	1,556	11,378	11,192	16,432
Cocaine salts "	—	10,829	6,152	5,274
Creosote carb. "	16,131	42,984	4,895	16,131
Aniline salt kin	14,250	161,918	80,156	54,484
Plasters "	3,346	15,444	15,307	15,421
All other drugs and chemicals and med. yen	336,322	980,622	1,308,915	1,619,632
Medicinal preps. "	9,553	44,268	41,589	49,166
Cassia and cinnamon oils kin	250	20,144	18,922	13,319
Citronella oil "	519	16,383	14,021	2,501
Turpentine gal.	39	14,785	47	901
Other essential oils yen	76,994	214,059	209,661	314,060
Linseed oil kin	54,819	729,133	738,115	251,699
Castor oil "	31,630	349,692	177,384	430,408
Olive oil "	7,101	21,063	22,663	49,041
Palm oil "	24,528	680,836	181,444	173,181
Soya oil "	—	37,112	981	145
Vaseline "	26,295	101,200	98,994	166,433
Vegetable wax "	—	774,342	56,694	227
Stearin "	292,474	514,855	448,066	1,343,163
Olein "	16,921	404,212	232,198	186,676
Quicksilver "	5,708	55,912	71,123	89,227
Toilet soap yen	127,283	321,476	356,344	414,390

EXPORTS.

	June, 1911	Six months ending June		
		1909	1910	1911
Agar-agar kin	186,784	1,450,153	1,702,257	1,625,960
Chillies "	26,442	671,453	746,851	765,828
Ginger, dried "	24,206	2,039,864	2,017,106	3,219,591
Soy sho	227,709	1,977,812	1,882,734	1,493,847
Ginseng kin	731	142,976	106,722	112,450
China root "	1,790	95,827	156,189	124,964
Coptis root "	5,220	16,053	27,459	18,858
Star anise "	571	312,458	186,343	91,165
Galls "	—	120,734	293,983	235,664
Sulphur "	3,388,272	28,331,937	37,088,576	18,418,691
Camphor "	235,845	1,537,057	1,430,378	1,735,263
Camphor oil "	1,852	624,046	564,068	481,141
Menthol "	2,201	35,236	54,622	56,906
Peppermint oil "	2,385	86,384	86,285	76,349
Iodine, crude "	1,125	9,604	5,873	7,839
Potash iodide "	4,734	13,655	33,779	25,846
Sulphuric acid "	198,063	1,552,956	2,115,758	881,143
Nitric acid "	21,894	179,196	110,182	104,843
Soda crystals "	179,746	1,048,615	1,492,067	766,925
Bleaching powder "	39,105	407,196	399,351	383,359
Prepared medicines yen	91,943	294,544	376,211	449,780
All other drugs, medicines, and chemicals "	54,180	343,349	397,938	555,330
Vegetable wax kin	421,676	2,856,788	2,429,775	2,467,677
Brushes, hair doz.	8,210	25,470	40,542	61,401
tooth "	159,001	534,977	901,594	886,413
nail "	22,932	47,370	70,566	174,763
Toilet water and hair oil yen	25,519	156,565	190,294	195,644
Tooth powder and paste "	9,922	69,187	75,189	93,854
Hair cosmetics, Jap. kin	7,372	90,389	84,962	81,199
Toilet powders "	6,405	65,672	77,687	63,411
All other toilet art. "	5,156	86,053	49,889	31,716
Soap, toilet doz	59,056	954,199	931,801	796,536
Bird-line kin	3,844	110,584	93,043	133,675
Surgical instr. yen	9,828	40,979	45,943	59,419
Spectacles number	119,784	616,127	1,237,214	1,259,789

Kin = 1.3 lb. Momme = 0.13 oz. Sho = 0.48 gal. Yen = 2s.

Trade Tabs.

CHINESE GALLS.—The exports from Shanghai during 1910 amounted to 56,187 cwt., against 55,241 cwt. in 1909 and 47,796 cwt. in 1908.

CHINESE ALBUMEN.—The exports of egg-albumen from Shanghai during 1910 amounted to 23,195 cwt., against 13,321 cwt. in 1909 and 3,428 cwt. in 1908.

TOILET-SOAP IN CHINA.—Among the imports into Shanghai during 1910 were 157,517 dozen toilet-soap, against 259,654 dozen in 1909 and 330,673 dozen in 1908.

ENGLISH ARSENIC.—The production of arsenic in the United Kingdom during 1910 was 2,153 tons, the value at the mines being 17,602/., against 2,880 tons, valued at 23,187/., in 1909.

THE "New York Commercial" reports that William H. White, of Brockton, Mass., found a piece of ambergris on the beach near his summer home worth \$19,200. The lump weighed 20 lb.

THE TOOTH-VARNISH employed by the Annamites is prepared with sticklac 30 parts, Chinese galls 10 parts, pomegranate-bark 5 parts, impure iron sulphate 2½ parts.—*Journ. Pharm. et Chim.*

SULPHONATED ORCEIN, or vegetable-red, much employed by confectioners as a colouring-matter, has, according to Mr. C. H. Lavall, of Philadelphia, great possibilities as a colour for pharmaceutical preparations.

CEYLON SOYA BEANS.—The Ceylon Agricultural Society has now succeeded in turning out a large crop of the soya bean in the Government stock gardens in Colombo, producing two varieties, the Japan (white seed) and the Java (black seed), and seed will, it is said, be shortly available for distribution. It is expected that the cultivation will be taken up largely in Ceylon.

British Pharmacy.

Impressions by a Japanese Pharmacist.

The following observations were written by Mr. Minoru Saito, of Tokyo, before he left London on January 1 for the United States after four months' residence here. Mr. Saito is the son of Mr. Manpei Saito, proprietor of the European and Japanese Pharmacy, 5 Kioicho, Kojimachi, Tokyo, and a fully qualified pharmacist in Japan. We append the writer's signature in English and Japanese.

THERE are many works in Japan treating of Great Britain, and I was always an earnest reader of these, and had, therefore, acquainted myself with much of its flourishing conditions. So I was delighted to have the opportunity of realising what I had read of. Notwithstanding my long residence in some of the principal cities of the Continent, where my experience might have been sufficient to prepare me for London, I was sincerely surprised to witness the exceedingly busy conditions of your city. I think we are convinced of the fact that London enjoys the pre-eminence of being commercially the first city of the world. I entertain the sincerest respect for the British people, who have developed their country to this degree.

It is about two years and a half since I left my native land in the Far East for Europe with the purpose of studying pharmacy in all its branches. After studying the subject in France, Germany, and Switzerland, I came last September to London, for which I had been longing for a long time. The first thing which surprised me was, as I have already mentioned, the tremendous bustle and business of your city, and the second was the frequent appearance of the sign of "Chemist," which seems to come to one almost as often as the tobacconists' shops. This impression may, of course, have been partly caused by my being accustomed to the comparative rarity of chemists' shops in Germany.

I have had the opportunity of visiting the pharmacies of Messrs. Allen & Hanburys (Lombard Street), John Bell & Croydon, Heppell & Co. (Piccadilly), W. Martindale, and Squire & Son, besides the dispensing department of the Army and Navy Co-operative Society. In some of these pharmacies I have been especially pleased to see perfect laboratories for chemical and bacteriological examinations, for these, being naturally a branch of the pharmaceutical science, ought to be studied and practised by the up-to-date thoroughly educated pharmacist.

The skill exhibited in the decoration of the show-windows of chemists' shops in London is quite peculiar, and we do not see anything like it in any other countries that I know. This is one of the features of British pharmacies. It is generally recognised that chemists' shops do not present so attractive an appearance as others, but I have observed with astonishment a certain chemist's shop, fitted up a few months ago, which, on account of the art and refinement with which its various beautiful articles of

perfumery were arranged, immediately reminded me of an elegant perfumery in Paris. And the dispensing-counter presented also so quiet an attractive appearance that I could almost have wished for a prescription to have been made up there.

It was also quite new to me to see the large drug department of a popular "Stores." It is needless to relate on the beauty and the convenience of the arrangement of this stores, for all of you must have already seen and know more about it than myself. But it struck me very strange that the dispensing department should be at the top of the premises, and all prescriptions are conveyed to it from the ground floor by means of an air-pump. As one prescription must pass through the hands of several persons, it seemed to me at first that there must be probabilities of occasional mistakes, but the perfect system and the

accurate care appeared to make errors impossible. Such a system of dispensing seems to be quite reasonable when one considers the number of prescriptions—a thousand a day. I should like to designate this "industrial dispensing."

No one would doubt that your country holds the highest place in commerce, but I really doubted whether British pharmacy would be up to this reputation, for the pharmacy business is more or less restricted everywhere by laws, which sometimes materially hamper commercial pharmacy. But after my personal observation, I

do not hesitate to say you British pharmacists fully sustain the reputation of the brilliant British commerce.

Some of our *confrères* are inclined to limit our activity as pharmacists to scientific and laboratory work, and they do not like to see on a chemist's premises those things which are usually dealt in by other trades, esteeming it unworthy of the scientist, and they would apparently like to restrict us to our laboratories. But I am of opinion that a chemist should be at the same time scientist and refined and practical business man, and that he may do anything and everything to promote his business, so long as it does not derogate from his moral dignity. I am exceedingly pleased to find this my idea realised in your British pharmacy.

M. Saito
Japanese Pharmacist
10/1/12



THE EUROPEAN SIDE OF SAITO'S PHARMACY IN TOKYO.

"DISEASES AND REMEDIES."—The fourth edition of this useful book for chemists has recently been published by the C. & D. It is a concise survey of the most modern methods of medicine, telling the nature of ailments and describing the methods of treatment. The fourth edition has been carefully revised by a general medical practitioner, and certain parts of the book have been entirely rewritten. It is published at 3s. (by post 3s. 3d.), and can be obtained from the C. & D. offices in London or Australia and from the wholesale and sundries houses.

A Piccadilly Pharmacy.

Notes on Messrs. Heppell & Co.'s new pharmacy in Piccadilly, London, which embodies artistic and original ideas.

IN Coronation week we mentioned that Messrs. Heppell & Co. had removed their Piccadilly pharmacy from No. 169 to 164, and we remarked upon the original nature of the new pharmacy. The interior is shaped like an L, about 42 feet long, front to back, 9 feet wide at the window end—this part forming a hall 14 feet long, leading to the dispensing and retail department, which measures 30 feet by 36 feet, and is lighted from the roof. Besides there are a manager's office and the office of the principal, Mr. John E. Jewell, which is on the Mezzanine floor, and is approached by a staircase shown in one of the illustrations. The remarks which we made in regard to the shop some months ago appear to have aroused the interest of chemists abroad and in the provinces who cannot visit it, and we



No. 164 PICCADILLY, LONDON, W.

have been asked to give some further details in regard to it. The photographs of the interior and exterior which we now reproduce show well details of construction and decoration. The exterior is 9 feet in width at the window, the enclosure being executed in English oak, which is used for the fittings throughout the whole shop, including doors, the woodwork being good examples of English workmanship. The parti-coloured glass over the doorway is fitted in lead, an effective mortar and pestle being worked into the centre. The next picture that we show is what we have called the hall, looking from the retail and dispensing department to the window. The whole of the fittings seen here are in oak, the style being Jacobean, of which period the architect (Mr. Jennings) is a well-known exponent. The electroliers are of an original design, in shape not unlike acid carboy cradles. These are made of tinned iron. At each side are show-cases with leaded glass doors, each pane of glass measuring 9 in. by 7 in., containing nine glass shelves; and the back is mirrored. There are three such cases on the right of the hall (left in the picture) and two on the left. The

large sponge-case on the other side is made of bronze, and has usually a display of perfumes on the top, including a fine Russian eau de Cologne, which is a favourite with aristocratic people. The wall-cases are devoted entirely to the exhibition of perfumery, toilet articles, and the specialities of the firm.



THE HALL: LOOKING FROM THE SALOON TO THE PICCADILLY WINDOW.

On the top of these cases are beautiful examples of old pharmacy jars, chiefly Italian and Dutch Delft, nearly 100 of them being distributed throughout the shop. These are examples from Mr. Jewell's fine collection. It is difficult to convey an impression of the feeling that one has on entering the pharmacy and walking up this narrow part of the shop, but it is most impressive. Moreover, it uses to the greatest advantage a front shop which would have been most inconvenient had it been fitted for the retail transactions of the pharmacy.

As one continues the walk over the carpet placed on the parquetry floor one passes on the right hand the cashier's desk, opposite which is the fine oak screen shown in the third picture. On the top of this are fine old specijars of unusually large size, and behind it the manager's office is placed. The retail department is like the retail departments of most West-end pharmacies, but here again we find evidence of an antiquary's taste, such as the Royal Arms illuminated on glass many, many years ago for the fanlight of a chemist's window, and on the wall a Cronwellian brass clock with its weights and pendulum.



OAK SCREEN TO THE LEFT OF THE HALL, SHOWING THE RETAIL AND DISPENSING DEPARTMENTS.

having the bare wall as a background. One gets some idea of this retail department from the glimpse seen of it behind the oak screen. The dispensing-counter is seen at the right of the picture, but the view is obstructed by a show-case. It is placed between the wall to the left and

the fireplace at the corner of the shop (seen in the fourth illustration). The dispensers work behind bent-glass showcases which stand 25 in. high and are 18 in. wide—a form that we have rarely seen, and which enables perfumes and toilet preparations, in which we may say in passing that Messrs. Heppell & Co. are specialists, to be adequately



FIREPLACE WITH OLD ENGLISH OAK SETTLE AND TAPESTRY-LIKE FRESCO.

displayed on glass shelves. One of the favourite perfumes is Imperial Violet, and Princess Alexander of Teck is its patron, it being put up under her name with her sanction. The counters in the retail and dispensing department are so disposed as to form a semi-circle without being conventional; in fact, a customer has the feeling that he is in a hall of good proportions in which evidences of business are present but are not obtrusive, yet tempt one to buy. On the dispensing-counter are a number of old mortars, including one of Charles II. period and another dated 1665.

The fireplace is the subject of the fourth picture as well as the last. The cheeks of the chimney are built of red bricks 200 years old, and the fresco has the Westminster Arms in the centre, being a remarkably good replica of old tapestry work painted by Mildred Jennings. The mantelpiece has two fine old specie-jars and a bronze



THE INGLE NOOK.
A Retail Counter in the Foreground.

mortar with some Delft jars, and there is an old oak settle, the seat of which is a convenient receptacle for illustrated price-lists and other literature of that nature.

In the last picture a counter is shown, at which Mr. William Wendon, the manager of the pharmacy, is generally to be found. His principal assistant (Mr. Hayman, to whom we are indebted for the photographs) is also

near at hand to receive customers, who find plenty of comfortable chairs to sit upon if they prefer to wait for what they want. There is much to arrest their curiosity. Showcases are an outstanding feature, and in them high-class goods are well displayed. We noticed that while ladies are principally catered for, the gentleman's toilet is not neglected, razors, hair-brushes, shaving-brushes, and other such articles, all of best class, being attractively displayed.

When the pharmacy was first opened last year the morning supply of mineral waters, as served at European spas, was a feature, but the pharmacy now opens at 8.30 A.M. and remains open until 12.30 at night. Being right in the centre of clubland, it draws business from denizens in the neighbourhood, and it supplies three hotels in the immediate neighbourhood. Kings and other Royal personages, as well as the nobility of practically every country in Europe, have visited the pharmacy when they have been staying at the Ritz Hotel or elsewhere in the neighbourhood, and many of them have expressed their delight at the artistic furnishing of the place. Mr. Jewell's office on the Mezzanine floor is approached by the staircase seen in the second picture. This room has also been decorated and furnished in excellent style. The basement of the premises is occupied by Wrigley's, Ltd., the chewing-gum manufacturers, who are educating Britishers into the merits of their spearmint gum. Of this company Mr. Jewell is a director and Mr. Stanley L. Murison secretary. Several tons of the gum were in the place on the occasion of our visit. Messrs. Heppell & Co.'s own wholesale department is in Chandos Street.

DENTAL NOTES.

Capsicum.

CAPSICUM for dental purposes is indicated where a mild counter-irritant and persistent stimulant is required. In soreness about the roots of the teeth due to external violence, in the first stages of pericemental inflammation, or for the relief of severe neuralgias the powerful counter-irritation which it produces, by restoring normal circulation, relieves the engorgement which causes the trouble. Its chief recommendation is the ease with which it stops inflammations, which, if unchecked, might lead to abscess. When, however, the inflammation has proceeded so far that it cannot be aborted, the persistent use of capsicum favours the production of suppuration. The plaster is the most convenient form for the exhibition of capsicum. It is made in small squares (sometimes half-moon shaped), or in suction caps. Applied to the seat of the trouble, it occupies small space, and a little firm pressure fixes it in position, where it can be allowed to remain until the desired effect is produced.

Porcelain.

PORCELAIN as a filling-material is the one that most closely resembles the tooth-structure in appearance; added to this its strength, resistance to thermal changes, and unchangeability under all conditions in the mouth—these all go to make it the ideal filling. The one point of weakness with regard to porcelain inlays is that they have to be cemented into the cavity. This, however, may be greatly overcome by having the inlay fitting accurately: the better the fit of the porcelain inlay, the thinner will be the cement line, and thus the more difficult it will be, and the longer it will take, for the cement to be dissolved out. When porcelain inlays first came into use various sizes of rods of porcelain were made by the manufacturers, and the dentist, having cutting burs of similar size, made a circular cavity in the decayed part of the tooth and fitted in a rod of porcelain of colour similar to the tooth. It was impossible, of course, to fit any cavity of irregular shape in this way, and, since the introduction of the various high- and low-fusing porcelain bodies, the above method has almost entirely gone out of use. With the up-to-date porcelain outfit it is possible to construct an inlay so natural in appearance, colour, and translucency that when fixed in position it will not be detected.

The Hydros of the Auvergne.

I MADE a short stay last summer at Mont Dore, the watering-place in the Auvergne Mountains, well known for the treatment of asthma, writes our Paris correspondent. The establishment is situated in a narrow valley at



GENERAL VIEW OF MONT DORE VILLAGE

some 3,500 ft. above sea-level, on the banks of the river Dordogne, which rises a few miles higher in the mountains. Some 8,000 visitors come annually to this little place, which has a permanent population of about 2,000 inhabitants, and it is easily reached by a nine-hours' railway journey direct from Paris. I found there three prosperous-looking pharmacies: M. Baraduc's, facing the baths; M. Charles Chazotte's, near the Post Office; and M. Dopzol's, opposite the Promenade. Much has been said about the French pharmacists' lack of commercial instinct, but there is scarcely any class, except, perhaps, the cafés and British taverns, who have a keener eye for eligible business sites. In fact, in France the street-corner landmarks by which the

pedestrian is directed are usually the pharmacies. As might be expected in a health-resort largely used for treatment of the respiratory organs, various special pieces of apparatus for the purpose are conspicuous objects in the pharmacies. One notices signs of American enterprise in this particular branch at Mont Dore, while the goods of some well-known British firms are also to the front. M. Dopzol's shop-window contained a striking display of the American skin-ointment Cadum, which is put up in France under the name of Mr. Nathan, of the British and American Pharmacy, Paris.

Numerous Gallo-Roman ruins found at the Mont Dore point to it having been the scene of elaborate thermal baths at a very remote period. During the Middle Ages the baths fell into disuse, but began to come into vogue again some 200 years ago, and since the railway was brought up there the popularity of the baths has gone on increasing. At the present time the bathing establishment can claim to rank among the leading hydros in Europe. During my visit the baths were opened at 6 A.M., and half-an-hour before that time a stream of men, women, and children was to be seen thronging to the palatial bathing establishment. They all wore like quaint thick flannel garments, consisting of a coat terminating at the upper end by a kind of hood or cowl, while their nether extremities, first encased in roomy "footed" pantaloons, were in most cases shod with clogs or rubber shoes. Thus clad in white or cheerful striped

patterns, with cloaks over their shoulders, the bathers hurried from the five side streets, with something approaching to feverish haste, to the principal entrance to the hydro, and when the doors were flung open at the stroke of six there was a pushing scene that reminded one of the Lyceum pit entrance when Henry Irving was in his zenith. But this rush at the hydro was obviated later by the doors being opened at 5 A.M.

The thermal baths as now existing are certainly organised on good lines, and I found them well kept up in almost every respect; but the most striking part of the hydro is the magnificent hall on the first floor of the building, which is open free, and is a favourite resort for visitors. There are eleven hot springs, finding their outlet in the establishment. In temperature the water averages from 105° to 115° F., and it contains sodium bicarbonate, iron, and a considerable percentage of silica. It is also claimed that the water exhibits all its physical and radio-active properties the moment it is used in the form of baths or for drinking-purposes. The principal sources are the "Madeleine," "César," and "Les Chanteurs."

As already mentioned many people walk to the baths, but one can also be carried in a kind of Sedan chair, which at Mont Dore takes the form somewhat of a large dog-kennel standing on end. These chairs are painted green, and as a matter of fact answer their purpose very well. But when one sees them for the first time carried by two porters at a shuffling run, the effect is both picturesque and striking. These conveyances take the "youth and beauty" of the place from bedroom to bath and return for 6d.

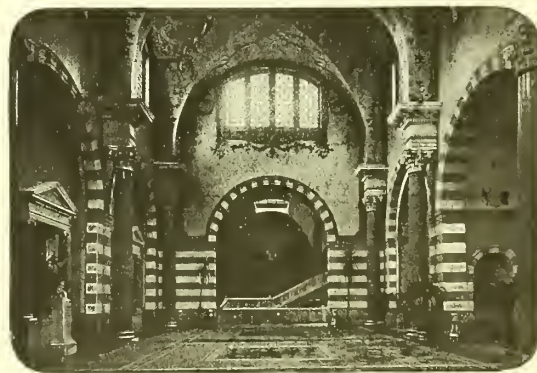
A speciality of the Mont Dore is the inhalation rooms, which are largely used for patients suffering from bronchial troubles. While asthma is the affection for which Mont Dore is most known, all bronchial affections are treated,



BATHERS IN COSTUME.



Gallo-Roman Column.



ENTRANCE-HALL OF THE HYDRO.

establishment as well as rheumatic troubles. The rest and air cure is a necessary part of the treatment, and a small park exists in the village, which is much used as a promenade, while a mountain railway carries visitors into the beautiful pine-woods on the Capucin Mountain which adjoins Mont Dore. The Mont Dore waters are bottled for export from the locality, and a pectoral paste, made up as a tasty sweet, is manufactured from the "Madeleine" spring, and is recommended for cold, sore throats, etc. The treatment can only be followed under the guidance of one of the twenty-one doctors who practise at Mont Dore.

Brushes and Lenses.

Notes on visits to Messrs. S. Maw, Son & Sons' tooth-brush and optical factories in London.

WE reported a fortnight ago that Messrs. S. Maw, Son & Sons, Aldersgate Street, London, E.C., had purchased a tooth- and nail-brush factory, and since then a representative of THE CHEMIST AND DRUGGIST has had an opportunity of inspecting this establishment in Hackney. It is from this factory that the firm have for many years drawn a portion of their supplies of tooth-brushes, and it is completely equipped with the latest machinery appliances. The factory is now under the direction of Mr. A. B. Britton, Ph.C., of Messrs. Maws' Aldersgate Street staff.

Man's seven stages of life are outnumbered by the tooth-brushes he uses, for in the production of a tooth-brush seventy stages can be counted and all are carried out in the Hackney Road factory, which at present occupies three contiguous buildings. The leg bones of the ox are the crude material from which the handles are made. These are received at the factory from the boilers, who have re-



FIRST STAGE.
Sawing the Bone into Strips.

moved from them the gelatinous material and the greater part of the fat. The first thing done in the brush factory is to cut the bone, which is about eight inches long, into five to seven strips. The texture of the bone differs in various parts, the quality varying accordingly, and here the manufacturers come in as selectors, the pieces of closest texture being sorted out for the highest-priced brushes. The strips cut are about three-quarters of an



A CORNER OF ONE OF THE "FASHIONING" ROOMS.

inch wide and one-sixth of an inch thick. Each is trimmed by planing, then squared, and cut to the measure required. (In the case of dental plate brushes and bone nail-brushes, also made here, the shapes and sizes differ, but the processes are similar.) The next stage is

to make the neck of the brush, which is done by what is known as a "profile" machine provided with a revolving cutter with toothed edge, the action of which is guided by a metal pattern made to the exact shape of the handle required. The process is a most interesting one to watch, and the men who do it are highly skilled workmen; their expertness is even better shown when with their hands and files they trim the handles as they come from the profiling stage and round the edges. When this is done the residuum of natural fat in the bone is removed by steeping in turpentine, subsequently boiling in water. Before it is carried further the bone is bleached and polished, the latter operation being done within revolving barrels, but the human hand accounts for much of the finish that is seen on Maws' brushes.

How many of the seventy stages are represented so far we do not venture to say, for admiration of the skill of the workmen, the work of the machinery, and the transformation of shape in the bone obliterate the enumerating faculty. This recedes still further when the departments are reached where occur the more delicate operations, such as drilling the holes in the head of the brush. This is done by skilled workers, who quickly drill the required holes, numbering sixty or more, in each head by means of a delicate machine drill. This is a cleverer process than it looks, because the hole is not bored right through, going only two-thirds of the thickness. By means of a "graver" longitudinal channels or slits are made in the back exactly



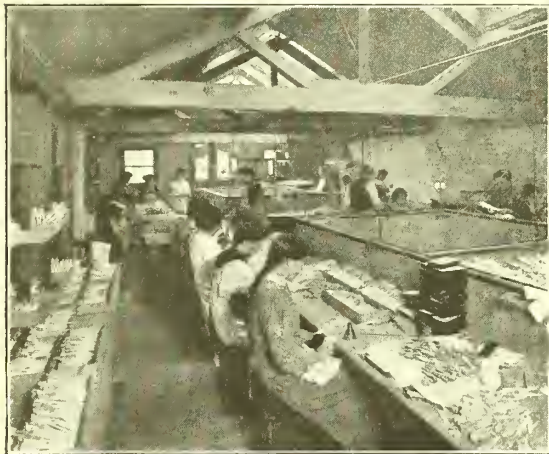
PART OF THE DRILLING ROOM.

Up to this Stage all Work is Connected with the Bone Only.

opposite the rows of holes, so as to meet the latter. In passing we may note that the draining holes in hygienic nail- and tooth-brushes are a penultimate stage in the manufacture, being done after the bristles are inserted, cemented and trimmed. The next stage of importance is drawing the bristles into the holes, an operation conducted entirely by female labour. The workers are supplied with the bone handles, bristles cut to the requisite length, and the silver wire for drawing. In another section of Maws' factory there are always a number of girls specially employed in this work for the purpose of filling urgent orders. It is astonishing how quickly they fill up the head of the brush with the little tufts of bristle, each tuft containing 35 to 40 pieces of bristle, which is deftly threaded into the wire, pulled home taut, another tuft inserted, and so on continuously with the thread of wire, which is very tough and serves the double purpose of drawing the bristle into place and holding it secure when there. It will be noted that a good quality brush contains about 2,500 pieces of bristle, which means 5,000 pieces if one counts from the finished brush. In the case of best quality brushes a very important operation next demands attention, for the bristle, in addition to being held in place by wire, is firmly cemented into the small bone sockets. The method and formula of this process constitute a carefully guarded trade secret, however, into which even our representative was not initiated. After special treat-

ment to ensure asepticity, the brushes pass along to the waxing bench; here we find a number of girls filling in the channels in the backs of the brushes with hot resinous compounds of the familiar red and blue colours, the exact composition of which is another not unimportant special formula. The process itself is quite simple, a short spatula sufficing to press home the "wax," the superfluity being afterwards removed when cold. The bristles are next trimmed over by means of cutters which revolve at very high speed, or by hand in some cases—a pair of scissors being used for the purpose. Another interesting and simple process is printing the brand or lettering on the bone. This is done by hand with a steel die and mallet, the brush for this purpose being placed on a small anvil and the hot die hammered upon it. An interesting fact is that the black for this purpose is that which is formed on the die when held in a gas flame, and no black could be finer or better for the purpose, since it is formed *in situ*.

These processes are exhibited in the photographs which were taken on the occasion of our representative's visit, but they are by no means all. A little touch here and there is given which makes for perfection, and now and then the bristles are subjected to rough handling, which seems the antithesis of the purpose of the labour—production of polished perfection; but, as Mr. Britton remarked, "a brush must be made of good bristle if it is to survive that treatment." This was one of the several processes of washing and rubbing which a brush goes through to which we have not referred in detail. Before the brush receives its final polish it is washed with soap and water and the finishing touches are imparted by hand. Then it



THE FINISHING ROOM.

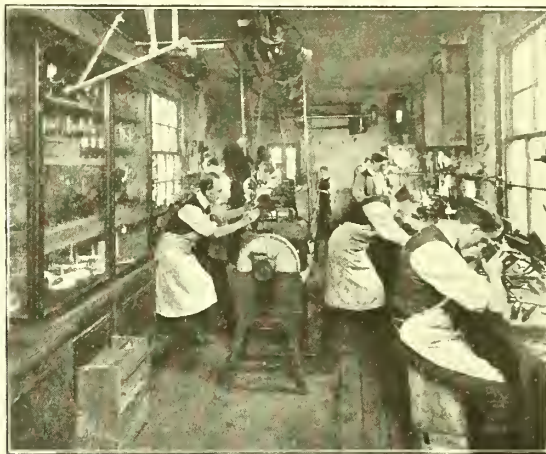
After Bristling, all Brushes are here Waxed, Trimmed, and finally Polished.

gets a last rinse in cold water and a woman deftly dries each brush on a clean white towel, the celerity with which this is done being not the least noteworthy of the nearly seventy stages through which it has gone before being finally examined, sorted and boxed.

Optical Works.

Our chemist-optician spent a very pleasant and instructive hour at the factory in Charles Street, Hatton Garden, where is carried on a variety of manufactures such as the making of hospital furniture, wood-turning, metal-turning, and optical goods. It is not universally known that Messrs. Maw have an optical factory of considerable importance. The manager of the optical department, speaking of the origin of this extramural factory, stated that some four years ago the business of Henry Crouch, one of the best microscope workers in this country, was taken over, and his instruments are now made in Maws' workshops under Mr. Crouch's superintendence. The optical workshop is at the top of a modern factory building, every convenience in the way of power and good lighting being available. One of the photographs

gives a good idea of part of this factory, where one sees microscopes in all stages of construction. It will be readily understood that metal working is an important part in the process of making a microscope, indeed a casuist might find it a useful exercise to define the relative importance of metal and glass in this instrument. For the purpose of



CONSTRUCTING AND TESTING MICROSCOPES.

High-speed Centrifugal Machines and Opsonic Incubators are also made here.

this note the result is interesting, as the complete microscope is made at this factory. The foreman placed in our representative's hand a collection of the rough brass-castings needed for a microscope. The patterns are, of course, a condition precedent, but these are designed specially, the brass-founder's *métier* being to reproduce exact replicas in metal. The parts were the foot, stage, and limb, with tubing of certain diameters. Upon these it is necessary to expend much time and labour, and it is this individual work, together with the lens system, that makes the character of a

microscope. On to the foot, which may be of either the horseshoe or the tripod pattern, is fitted the stage. This in turn receives the carrier, rotary pattern or otherwise, and, upon a downward projection or "tail rod," are fitted the sub-stage and reflecting mirror, the details necessarily varying with the pattern of the instrument. The limb, upon which many advantages of adjustment depend, appears in a special type, while the diameter of the draw-tubes and screw-threads follow the international standards adopted by the Royal Microscopical Society. The factory is equipped with the numerous appliances for working metal, and passing along the benches one sees the instruments in all stages of manufacture.



A CORNER OF THE OPTICAL ROOM.
Devoted to Lens Grinding and Construction.

In another workshop lenses for the objectives and eye-

pieces are ground. This is an extremely interesting operation and also involves delicate manipulation, the one-twelfth oil-immersion lens being only a little larger than a pin's head. The endeavours which have to be made to correct both spherical and chromatic aberration involve matters of detail which make it almost impossible to foretell whether a perfect lens will be produced, but with



GENERAL BRASS AND METAL WORK.

Pill Machines, Brass and Pewter Syringes, Enema Fittings, and other Druggists' and Surgical Sundries.

modern glass many of the troubles of the old-time optician are things of the past.

Leaving microscopes, a visit was next paid to the shop where spectacles and eye-glasses are repaired and prescriptions for glasses filled. The workers here are of exceptional experience in this branch of optics. This department has attained considerable dimensions, and it is in contemplation to enlarge it so as to ensure a continuance of the practice of promptly dispatching all orders. The number of chemists who have taken up optics has contributed largely to the success of this department, which by promptness in executing prescriptions and repairs has justified its position. On the same floor there are also carried out many interesting manufactures. Here were



HOSPITAL FURNITURE FACTORY.

Making Aseptic Operating Tables, Dressing Stands, Instrument Cases, etc.

being turned the boxwood tops for corks, further on the ivory ear-pieces for stethoscopes and at another bench the pewter valves for enemas were being made. At this factory an important department is the manufacture of hospital furniture. In another part of the factory pill-machines are made, this special article being a combination of metal and wood work.

Retinoscopy Simply Explained

For the Use of Students in Optics.

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1.

RETINOSCOPY is, above all other methods, the most practically useful for readily estimating the nature of errors of refraction. The mode of using the retinoscope is easily learnt, and with intelligent application of the findings it gives, one can tell at once the nature of the error. Retinoscopy does not inconvenience the patient, and requires for its practice no expensive outlay in apparatus. It reveals at once the existence of opacities in the cornea and lens. It has, too, the advantage that with it the whole refractive media are brought under notice at one time, whereas with the ophthalmometer, for instance, one is dealing with corneal error only. When the initial difficulties have been mastered by frequent practice and results checked by the trial case, risks of error are reduced to a minimum, remembering always that the eye is by no means a perfect or passive optical instrument, but complicated by muscles, nerves, and pathological conditions. To deal successfully with it requires, above all, patience and keen attention to apparently trivial details.

INSTRUMENTS NEEDED.

Retinoscopes are of various types, consisting essentially of a mirror with a sight-hole in the centre. The mirror may be plane or concave—the writer prefers the latter, as the illumination with it is better than with the plane. A useful size is 4 cm. diameter with a sight-hole of 3 mm. Where the mirror is of "Flemos" glass there is the additional advantage that the glare is reduced without diminishing greatly the illumination. Except the trial case, no other appliance is needed, unless it be some form of opaque chimney for the gas or other illuminant used. The aperture in the side of this chimney from which the rays emerge is sometimes arranged with an iris diaphragm to reduce or enlarge the opening, but where a fixed aperture is used, 10 mm. diameter will be found to answer all requirements. The most convenient situation for the light is immediately over the patient's head, as when arranged as it sometimes is on an adjustable bracket at the side, it needs changing over when the other eye is tested. Take care that the patient has a comfortable chair; it is well to have chairs of varying height available, so that the patient's head can be on a level with your own, but do not use mechanical ones, as they are suggestive of dental operations.

HOW TO OBTAIN PRACTICE.

Before commencing to practice on the human eye, it is advisable to obtain a practice eye, and not attempt to work with the natural eye until the student can with rapidity and certainty correct errors in the model. Two principal types of practice-eyes are on the market, the simpler and cheaper form consisting of two boxes telescoping one into the other, one having a strong convex lens at the end and the other a representation of the fundus on the inside, the various conditions—hyperopia, emmetropia, and myopia—being obtained by altering the distance between lens and fundus. In the improved form known as the "Hu Model," designed by Chalmers and Ryland, and obtainable from Raphaels, Ltd. (see *C. & D.*, October 28, 1911, index folio 640), the types of the different refractive conditions are shown by solid blocks of glass ground to represent the actual lengths and forms of the emmetropic, hyperopic, and astigmatic eye. These blocks are inserted in a tube-holder on a stand and an artificial fundus placed at the back, thus giving the nearest possible approach to natural conditions. An iris diaphragm adds materially to the usefulness of this model, as one often has to work on very small pupillary orifices. For those who wish to study ophthalmoscopically diseases of the fundus, additional fundi, 12 in all, are supplied.

The diagram (fig. 1) illustrates the passage of rays of light in retinoscopy which, emanating from the aperture in

the chimney, are reflected by the mirror, meet at a point, diverge, some of these divergent rays enter the pupil and

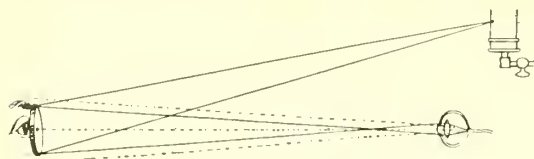


Fig. 1.

are reflected back into the observer's eye through the sight-hole in the mirror.

The retinoscope is most conveniently held with the handle horizontal, the back of the mirror resting lightly against the eyebrow to steady it. Now looking through the sight-hole and keeping both eyes open, reflect the light from the mirror upon the wall at the back, hold the mirror still, and bow the head slightly—the reflected patch on the wall moves downward. Now hold a convex lens— $+8D$ at arm's length—between the mirror and light patch and again move the head up and down; you will see that now the patch of reflected light moves the reverse way to the movement of the mirror. This reverse movement is exactly what happens in the natural eye, but the apparent



Fig. 2.—This illustration shows the method of practising retinoscopy. It should be studied in connection with fig. 1, where is given diagrammatically the course of the light rays.

motion is entirely dependent on the refractive condition of the eye under examination.

The object of these articles being to put the subject of retinoscopy as simply as possible, the optical reasons for this variation between the real and apparent motion is omitted, the information being obtainable from various text-books.

WITH THE PRACTICE-EYE.

Now proceed to the practice-eye. Place the model on a table below the light at about the level of the operator's eyes, insert the emmetropic-globe if the Hu Model is being used, or in the cheaper form, slide the inner tube to the position marked O. Seat yourself just over one metre away, and, holding the retinoscope as directed, reflect the light on the front of the model—keeping both eyes open facilitates this. The pupil will now be illuminated with a red glare, due to the emerging rays from the fundus. Bow the head slowly, and it will be found that this glare disappears upwards, the shadow following it being very marked by contrast. Reverse the motion of the head, and the glare moves downwards, move the head from right to left—the light travels to the right—reverse the movement of the head and the light goes to the left. Now take a $+1.0$ sph. lens from the trial case, place it into the cell of the model, and go through the same movements as before. It will be found now that the movement of the light is in the same direction as that in which the mirror is being turned—i.e. the $+1.0$ sph.

has reversed the movement. Try a $+0.75$ lens—it will be found that the movement is against the mirror as at first. Now, in working at one metre from the eye, deduct $+1.0$ from the convex lens which reverses the motion and add -1.0 to the concave needed to obtain reversal. As the lens needed was $+1.0$, the condition is emmetropic; had it needed $+1.5$ to reverse after you have deducted the $+1.0$ for the distance at which you were working, $+0.5$ is obtained as the measure of hyperopia present.

Should the working of the model be incorrect, as may happen, adjust the sliding-tube until $+0.75$ gives motion against and $+1.0$ with the mirror before proceeding with the following experiment: Take a -6.0 sph. lens from the trial case and place it into the back cell of the model and note how the brilliancy of the reflex has decreased and how slow is the movement of the light across the pupil in relation to the rate of movement of the mirror. Then remove the -6.0 lens and compare the rate of movement in emmetropia.

This comparative rate of movement is of the highest importance, as the movement is relatively slower as the ametropia increases; in other words, the more rapid the movement the less the error; the slower the movement, the greater refractive error. When the -6.0 sph. was employed, it rendered the emmetropic eye hyperopic to the extent of $6.0D$. Replace the lens and proceed to correct it, remembering that the relative rate of movement is slow and the illumination dull. The amount of hyperopia present must be considerable, so in order to save time place into the front cell a $+3.0$ lens; the motion is still against the mirror, but the reflex brighter and the movement relatively quicker. Proceeding by half dioptres, the motion becomes quicker, until on arriving at $+7.0$ it is found that the motion is reversed—i.e. in the same direction as the movement of the mirror. Deduct $+1.0$ from this for the working distance, and the correction is proved. Do not forget that both vertical and horizontal motions must always be tried with each correcting lens used.

Next make the emmetropic eye artificially myopic by placing a $+2.0$ sph. in the front cell. It will now be found that the light moves across the pupil in the same direction as the mirror is tilted and fairly rapidly. Take out the $+2.0$ and replace it with a $+10.0$; the reflex is now very dull and the rate of movement very slow. This shows that there is a considerable amount of myopia present, so that the operator can pass over the weaker lenses and commence with about -5.0 sph. and go on until the weakest lens is reached that causes the light to go the reverse way to the motion of the mirror. This has corrected the myopia.

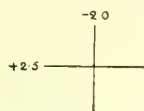
ASTIGMATISM.

Having thoroughly mastered the respective motions for hyperopia and myopia, the student may proceed to the estimation of astigmatism. Placing a -3.0 cyl. in the cell of the model with its axis vertical, the eye is rendered hyperopic $3D$ in the horizontal meridian. On using the retinoscope, a movement is obtained against the mirror both vertically and horizontally, but the rate of movement is slower in the latter direction than in the vertical. On putting a $+1.0$ sph. in the front cell and again using the retinoscope, the vertical motion is with the mirror. The horizontal against the margin of the light has also a straight edge or band of shadow following it, therefore the case is simple hyperopic astigmatism. Now disregard entirely the vertical meridian and, putting in stronger convex lenses, find out the weakest which will reverse the horizontal meridian. This proves to be $+4.0$; deducting $+1.0$ for the working distance gives as the correction $+3.0$ cyl. axis vertical. Still using the -3.0 cyl., rotate it, say, to axis 45° , and on trying it with the retinoscope exactly vertically and horizontally, it is found that the motion of the light is no longer parallel to the movement of the mirror, but has a tendency to disappear in a slanting manner. If now there is put in a $+1.0$ sph., it will be found that on trying the mirror on different meridians there is developed the characteristic band of astigmatism—that the motion along its axis is with the mirror and at right angles to its axis against the observer. Correct this in exactly the same manner as in the former

experiment, tilting the mirror so that the light travels at right angles to the edge of the band.

Now make the practice-eye myopic in one direction by using a + cyl., and correct with *minus* lenses. Note particularly the direction of the axis as shown by the straight edge of the band and practice the foregoing experiments until quite proficient.

It is a good plan to collect some discarded sph.-cyl. lenses and practice first on compound hyperopic and compound myopic astigmatism, using these old lenses for the purpose of making the emmetropic practice-eye ametropic. Take, for instance, a lens - 3.0 sph. - 2.0 cyl. axis horizontal, and it will be found that the movement is against the mirror in all directions, consequently start with *plus* lenses and trying the motion in both vertical and horizontal directions with each increase of lens-power, it will be found that when + 4D is reached, the light motion is with the mirror in the horizontal but against it in the vertical meridian: this denotes compound hyperopic astigmatism. Noting down the strength of lens needed to reverse the horizontal movement, use lenses of increased *plus* power until reversal is obtained in the vertical direction; + 6.0



will be needed to do this. The difference in strength of the two lenses—viz., 2D—is the amount of astigmatism, and the weaker lens, deducting + 1.0, the strength of the spherical required. Mixed astigmatism—i.e., one meridian hyperopic and the opposite meridian myopic—is dealt with by first correcting the hyperopic meridian, noting down the convex lens required, and then testing the myopic in the same way, indicating the result graphically as shown.

Quassiae Lignum.

A country chemist tells how the popularity of this old drug has revived, and indulges in some reflections.

IN the long list of herbs, flowers, barks, or roots that have come within the range of the oldest pharmacist alive, probably few have kept their place so well as the old-fashioned Lignum Quassiae, popularly known as "Quassia Chips." It is true quassia does not bulk to the same extent in the Pharmacopœia as in days gone by, for whereas in the present B.P. the preparations are limited to a tincture and an infusion, there were formerly an extract and a compound tincture also. I do not refer to quassia in this note because of its official connection, however, but rather because of its popularity as a known drug and on its own merits with the general public. The interesting point about it is that its popularity has revived recently, but for a different reason from what obtained many years ago. One's thoughts on this subject lead one almost into a reverie on the changes that have taken place in the labelling of shop-drawers, and from which one could almost trace the history of pharmacy itself. In other words, quassia is one of the very limited number of drugs that a pharmacist would still require to make provision for in his shop-drawer arrangements if fitting up a pharmacy, just as his predecessor, the druggist of fifty or even a hundred years ago had to do. Of how many of the well-known drugs would this hold true? Of many that started with quassia in the race for popular favour, some have fallen almost entirely out of use, or at least, take up less room now than required by a drawer. Among this class might be mentioned actæa racemosa, bael-fruit, broom, conium, krameria, horseradish, pomegranate, and many others. Of these it might be said, "Let them go, no great harm done." But what of a much larger number of drugs, preparations of which are in constant daily demand still, but the raw material of which is now seldom seen? What of aconite-root, belladonna-leaves, henbane-leaves, hemlock-leaves, ipecacuanha, jalap-root, lobelia, and podophyllum, all regularly stocked and in regular use in days gone by? I have no hesitation in saying that a completely new labelling of the drawers in many cases would be required to-day if the drawers are to be of use for what they say, and not be simply

receptacles of relics of a bygone trade. This is the outcome of "ready-mades" and keen buying as against "personal guarantee"; mere retailing as against the preparation of all tinctures, infusions, and pills.

What chance has an apprentice under these conditions? Formerly there was every opportunity for becoming acquainted with every known drug. Every boy knew, or had the chance of knowing, the difference between horseradish and aconite root, or tormentil root from either. The difference between sandarac and mastic was easily pointed out. The similarity and dissimilarity of buchu and uva ursi leaves were carefully noted, while henbane and digitalis leaves were handled as familiar friends. Pharmacaceutically, in many ways, the old former days were better than these. And so we hail at least one drug, in the shape of Lignum Quassiae, which has stood the stress and strain of 150 years, and which enters upon an apparently new lease of life, if even for different, and it may be inferior, purposes. The new demand is not for the inner and higher part of man's economy so much as for his external comfort and well-being.

The quassia goblet, or wooden cup, is one of the earliest recollections of our apprentice days, and its use was exceedingly simple: "Fill with cold water, let stand for a few hours, then drink." As a tonic, could anything be handier, simpler, or safer? The chips or raspings also were in regular demand for infusion for home use. Those were the days when taste and smell did not enter into the calculations, but when a breakfast-cupful of infusion of quassia or senna was swallowed with equanimity and profit. Is there any connection between the ancient and modern uses of quassia? I think there is, although it has been long in developing.

Professor Christison spoke of the immunity of quassia wood from the attacks of insects; nowadays there is hardly a limit to its application and usefulness as an insecticide. Its anthelmintic properties have long been recognised. It has been sold in a modified way also to kill ordinary house-flies, but, as it is impossible to sweeten quassia sufficiently to hide the bitterness without destroying its usefulness, it has only been a modified success. There is no reason, however, if insects won't come to the quassia, why quassia should not be taken to them, and that it is an insecticide of the greatest value is being increasingly recognised. In the spread of this information the enterprising pharmacist may have his share—and his reward. The medical inspection of school-children now adopted throughout the country shows a lax condition of cleanliness on the part of the children's heads—so bad in some cases as to require the issue of a special circular to parents bearing upon the matter. Here there is boundless scope for enterprise. Quassia is one of the surest, safest, cheapest, and best insecticides that can be used. It can be recommended and sold in a variety of ways for the purpose, such as:

- (a) Quassia wood, labelled with the name of the article.
- (b) Put up in 1d. parcels, with directions to infuse for a pint of lotion, a pinch of borax being added, and a slightly higher charge made.
- (c) As an infusion prepared and ready for use, with directions for same.
- (d) Specially got up nicely as a nursery hair-wash, in which case it may be coloured and perfumed "to taste." The strength ranges from 1-10 to 1-20, or may be made from the extract, 10 grains of which makes a 6-oz. lotion. Other ingredients may be added to give elegance and usefulness, such as quillaia, acetic acid, oil of sassafras, glycerin, borax, phenol, or camphor.

But its usefulness does not rest here. In the recent turmoil of horticultural poisons, etc., much was made of certain insecticides, as if they were indispensable to the florist. Without claiming that quassia will take the place of everything else, I say that to the average householder cultivating fruit or flowers in small plots, and especially for pot plants in the house, an infusion of quassia in soapy water is practically all that is required. To the green-fly in rose-bushes it is fatal, a strength of 2 oz. to the gallon being sufficient, with an equal quantity of soft soap, and safe to use. In fact, there is hardly a limit to its usefulness. For floors or woodwork liable to insect attacks it is invaluable. To take full advantage of this merely requires a little tact and push on the part of chemists.

Pharmaceutical Veterans.

Mr. F. S. Moore.

IN the pleasant little market town of Castle Carey, in Somerset, lives Mr. Francis Samuel Moore, one of the most respected of the townsmen. Mr. Moore is a chemist and druggist, and his fellow-townpeople are proud of him



MR. F. S. MOORE.

because he has never failed them in the various positions of honour to which he has been elected. It is men of this stamp that contribute largely to keep up the status of chemists throughout the country, making them respected not only for their educational attainments but because they return to the community a full measure of service. Mr. Moore was born at Castle Carey seventy-three years ago, his father being a printer and stationer. He was, in 1853, placed as an apprentice for five years with Mr. Sharland, 28 Park Street, Bristol,

who had succeeded to the branch shop of Messrs. Giles & Son, Clifton. At the end of his apprenticeship Mr. Moore entered for the Assistants' or Minor examination under the Pharmacy Act, 1852. His certificate is dated October 19, 1858, and is interesting on account of the names of the examiners which it bears. These are of men who founded

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Pharmaceutical Society Great Britain

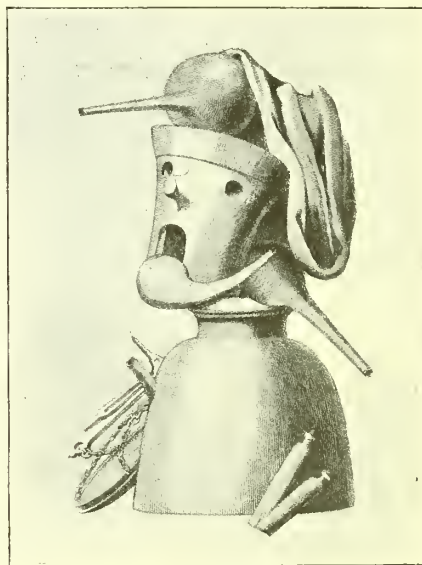
We the undersigned Examiners appointed by the Council under the provisions of the Charter of Incorporation, having examined Mr. Francis Samuel Moore do hereby certify that he is duly qualified to be Registered as an Assistant under the provisions of the 15 and 16th Vic Cap. 56

Jacob Bell Chairman
John Cracknell
Henry Deane
Peter Squire
Augustus Bird
J. T. Davenport
Elias Bremridge, Secy

London 19 Oct. 1858

the Pharmaceutical Society, men of broad outlook. It will be seen that among the names are Jacob Bell, Charles Cracknell, Henry Deane, Peter Squire, Augustus Bird,

and J. T. Davenport. Elias Bremridge, the Secretary, was the father of Mr. Richard Bremridge, the present Registrar and Secretary. It was this examination which, on the passing of the Pharmacy Act, 1868, became the qualifying examination. It was, of course, quite a voluntary test before that time. After passing it Mr. Moore returned to Castle Carey and commenced business with his father, whose sight failed him. Shortly afterwards he was appointed chief actuary at the head office of the East Somerset Savings Bank, which position he held till the business was made over to the Post Office in 1889. A memento of this is a handsome drawing-room clock which the trustees presented to Mr. Moore on his marriage. He resided seven years at Weymouth and fourteen at Bath, and was a member of the old Bristol and Bath Pharmaceutical Association. In 1889 he was elected a member of the Wincanton Board of Guardians, and on the formation of the District Council he was elected one of the first members after a contest. Both these positions he holds still. Mr. Moore is also Chairman of the Castle Carey Parish Council Parochial Committee and Market House Company, as well as a director of the Castle Carey Water Company, trustee and treasurer of the Gifford Charity, and member of the Wincanton Hospital Committee. Mr. Moore is vigorous and young in spite of his years. He is a non-smoker and a teetotaler, and attributes his good health to his habit of taking a cold bath daily; this he keeps up all the year round, except that at one period when he bathed in the open air he had perforce to study the thickness of the ice. Mr. Moore is a cyclist, and carries on business in the premises in which he was born.



A Chymist.

A Chymist this!—your shoulders do not shrug—
Why not—when Malthus proves mankind a Drug?—T. H.

WE are indebted to Mr. W. Maskew, Ph.C., Clacton-on-Sea, for the loan of a steel engraving from which the above reproduction has been made. It was published by W. B. Cooke, 9 Soho Square, London, on June 1, 1829, and bears the above inscription.

RUSSIAN PLATINUM.—The exports of platinum from Russia during 1910 amounted to 15,614 lb., or 1,029 lb. more than in 1909; of this quantity 1,512 lb. (valued at 113,773*l.*) was shipped to the United Kingdom, as against 684 lb. (valued at 49,604*l.*) in the previous year.

"FIFTY USEFUL METRIC EQUIVALENT TABLES" is the title of a card, folding into three, issued by the Central Translations Institute, 16 Eastcheap, London, E.C., at 6*d.* net. Examples of the tables are metres to yards, litres to gallons, shillings per foot to francs per metre, and shillings per cwt. to francs per 100 kilos.

Drugs and Soap.

Notes on the pictures of the Administrative portions of Messrs. Wright, Layman & Umney's extended premises in Southwark Street, London.

IN our Summer Issue of July 29, 1911, we reported a visit to Messrs. Wright, Layman & Umney's extended premises in Southwark Street, London, S.E., on which workmen were engaged then on alterations consequent on the company having acquired long leases of Nos. 44 and 46, which are contiguous and continuous with Nos. 48 and 50, which they had hitherto occupied. This gives them possession of the triangular block from the Castle Street corner to No. 62. In the course of a more recent visit we found that a great change had been effected in the interval, departments being expanded and straightened out, new arrangements made for the filling and despatch of orders, and a general reorganisation of means and methods has been accomplished. All goods now go into the warehouses by an entrance in Castle Street, and everything goes out at No. 50 Southwark Street. The directors of the company in Southwark Street formerly had their offices in No. 50, where they and the clerical staffs worked under congested conditions of space.

Now the office and business entrance is at No. 46, where a most elegant and artistic suite of rooms and offices has been made and furnished. On entering No. 46 one finds a handsome staircase constructed of solid English oak. This is not a mere show staircase, because it is continued to the fourth floor, or two floors beyond the public part of the building. The same material and design are used in the public offices and in the directors' rooms. To the right is an office devoted entirely to Wright's Coal Tar Soap business, this being kept quite

who looks after the drug market, warehouses, offices, and other commercial departments, has his room, and our photographer was able to "snap" a corner of it. Mr. Wright, like his colleague, Mr. John C. Umney, uses the dictaphone for his letter-writing, and it is seen at his elbow. Mr. Wright's room is so placed that he can control the general office, of which a view is given on the next page.

Mr. Umney's room is on the first floor to the left on reaching the head of the staircase. It is a handsome apartment, wainscoted in dark oak, the floor, like those of other rooms, being in parquet, and the ceiling is a specially designed piece of plaster work. The windows are double to keep out the noise of Southwark Street, and the inner casements are filled with leaded glass, with medallions sympathetic with the business. One shows the collection of spices in the East, the second the merchandising of these, the third is emblematic of pharmacy, and the fourth shows the administration of medicine. The room is of unusual design, the end opposite the window being circular, this giving it a distinction rarely seen in an administrative chamber. The room is so furnished that it can be used on occasion for meetings of the directors, but it is here that Mr. John C. Umney spends his days, a telephone on the left hand of his desk and a dictaphone on the right.

Portraits of Mr. Charles Umney and of the late Mr. Layman are over the mantelpiece, and on the walls are a number of diplomas which have been awarded to Wright's Coal-tar Soap or preparations, while a few pictures of a personal nature give a homely aspect to the room. Next door to this is Mr. Umney's secretary's room, which is also in oak. On the other side of the staircase is a floor filled with advertising literature for Wright's Coal-tar Soap.

Our representative had a smart walk over the whole



THE STAIRCASE.



CORNER OF MR. WRIGHT'S ROOM.

distinct from the other operations of the company. On the left is a spacious general office, well lighted and well arranged, and as an annexe to it, with windows overlooking Castle Street, Mr. Herbert C. Wright, the director



COAL-TAR SOAP OFFICE.

premises from basement to roof, and, without attempting to go into particulars, it may be stated that there is splendid cellarage, which enables large stocks of essential oils, cod-liver oil, and similar products to be carried. The new third

and fourth floors are devoted to crude drugs and chemicals. Another floor has been added to the packed pharmaceuticals department, and the packing of soap has been taken to the Park Street factory, of which Mr. E. A. Umney is the director in charge. The floor space of Nos. 48 and 50, previously devoted to offices, has enabled the company to

Ten Consolation Prizes of 1l. each.
 E. A. Atkins, M.P.S., 71 East Hill, Wandsworth, S.W.
 A. W. B. Browning, c/o G. Stuart-Jones, 332 West Street, Durban, Natal.
 W. G. Burge, M.P.S., 123 Shirland Road, Paddington, W.
 A. Crossley, M.P.S., 73 Shaw Heath, Stockport.
 C. R. Fairman, 11 Manor Park Parade, Lee, S.E.
 H. P. Fletcher, 9 High Street, Scunthorpe.

Neve & Co., 12 Wellington Place, Hastings.

H. C. Payne, 78 Essex Road, N.
 Allwood Simpson, M.P.S., 8 Melbourne Street, Stalybridge.

C. E. Shipman, Sudley Pharmacy, Bognor.

We have seen a proof of the inset placed in this Winter Issue, which contains engravings from photographs of the principal prize-windows. The first one was a magnificent window, in which the fullest prominence was given to the soap and kindred articles. Curiously the engraving does not do this window so much justice as it does to the second-prize window—one in which the artistic effect of an adventitious exhibit is, if anything, accentuated. Another competition of a similar nature in connection with the soap is announced for this year, and particulars in regard to it may be obtained on application to Messrs. Wright, Layman & Umney, Ltd. One of the facts which our representative's visit brought out was that the proprietors are ever ready and always willing to help retailers to sell their specialities as quickly as possible, and their stocks of advertising



THE GENERAL OFFICE.

make a special despatch-packing room for coal-tar soap, and to reorganise the general packing department, to which are brought goods from all parts of the building in a systematised manner, consistent with accuracy and celerity. Other new provisions for the working parts of the business have been installed, and all the workers feel that they now have elbow room—for the present at least.

It is not inappropriate to mention here as a postscript the

AWARDS FOR CHEMISTS' WINDOWS

which Messrs. Wright, Layman & Umney have communicated to us as the result of their 1911 competition. The conditions of the competition generally were that the firm supplied advertising material, such as show-cards, which the window-dressers might or might not use, along with Wright's Coal-tar Soap and other preparations of the Liquor Carbonis Detergens series to make their display. The company received an excellent response, and the task of the adjudicators was not a light one, for a large number of the windows, as reproduced in the photographs, showed high artistic merit and originality of design; but in the result the following were adjudicated the prize-winners:

First Prize, 25l.—James W. Harper, Starbeck Pharmacy, Starbeck, near Harrogate.

Second Prize, 15l.—D. Llewelyn Jones, M.P.S., 3 Ivy Buildings, Colwyn Bay.

Third Prize, 10l.—H. E. Clement, chemist, Hampton Hill.

Fourth Prize, 5l.—W. E. Scholefield, 8 High Street, Swadlincote.

material and novelties are good helpers. The persistent advertising to the public can thus be backed up well by retailers themselves, so that they can reap locally of the harvest that grows from Southwark seed. Co-operation such as this is now regarded by business men in the retail trade of the present day as one of the essentials of success. The traditional idea that the retail chemist must wait on the public and supply



MR. J. C. UMNEY'S ROOM.

what is asked for remains, but that part of the tradition which implies that the chemist can do no more is obsolete. As a salesman he can attract customers by his displays, and his efforts can be backed up by manufacturers. And thus the wheels of enterprise go round.

GERMAN AND BRITISH PHARMACOPOEIAS COMPARED.

The following tables are supplementary to those given in "The Chemists' and Druggists' Diary, 1909." They are based on the 1910 Edition of the "Deutsches Arzneibuch."

IN dispensing a German prescription all the ingredients are weighed. In compounding a mixture it is customary to tare the bottle on the scales with small shot contained in a special receptacle. The ingredients are successively weighed into the bottle, usually beginning with the smallest quantities. All the proportions and percentages in the following tables are calculated by weight—i.e., grams in grams of fluid. Extract of belladonna and extract of hyoscyamus of the D.A.B. are prepared from dried leaves, and are standardised to contain 1.5 and 0.5 per cent. respectively of hyoscyamine. Instead of aqua laurocerasi it is permitted to dispense aqua amygdalarum amarum, which contains 0.1 per cent. of hydrocyanic acid; but aqua laurocerasi not being official in the D.A.B., there is no *vice versa* in this case. For further particulars concerning the dispensing of German prescriptions, reference should be made to "The Art of Dispensing."

Identical Articles.

D.A.B.	B.P.
Acetanilidum	Acetanilidum
Acidum arsenicosum	Acidum arsenicosum
Acidum benzoicum	Acidum benzoicum
Acidum boricum	Acidum boricum
Acidum carbolicum	Acidum carbolicum
Acidum carbolicum liquefactum	Acidum carbolicum liquefactum
Acidum chromicum	Acidum chromicum
Acidum citricum	Acidum citricum
Acidum gallicum	Acidum gallicum
Acidum lacticum	Acidum lacticum
Acidum salicylicum	Acidum salicylicum
Acidum sulfuricum (94.98 %)	Acidum sulphuricum
Acidum tannicum	Acidum tannicum
Acidum tartaricum	Acidum tartaricum
Adeps lanæ anhydricus	Adeps lanæ
Adeps sullus	Adeps
Æther	Æther purificatus
Æther aceticus	Æther aceticus
Alcohol absolutus	Alcohol absolutum
Alumen	Alumen
Alumen ustum	Alumen exsiccatum
Ammoniacum	Ammoniacum
Ammonium bromatum	Ammonii bromidum
Ammonium carbonicum	Ammonii carbonas
Ammonium chloratum	Ammonii chloridum
Amygdalæ amare	Amygdala amara
Amygdalæ dulces	Amygdala dulcis
Amylium nitrosum	Amyl nitris
Amylum oryzae	Rice-starch
Amylum tritici	Wheat-starch
Apomorphinum hydrochloricum	Apomorphinae hydrochloridum
Aqua calcarie	Liquor calcis
Aqua destillata	Aqua destillata
Argentum nitricum	Argenti nitras
Argentum nitricum cum kalio nitrico	Argenti nitras mitigatus
Assa foetida	Asafoetida
Atropinum sulfuricum	Atropinae sulphas
Balsamum copaivæ	Copaiba
Balsamum peruvianum	Balsamum peruvianum
Balsamum toluatum	Balsamum toluatum
Bismutum subnitricum	Bismuthi subnitras
Bismutum subsalicylicum	Bismuthi subsalicylas
Bolus alba	Kaolinum
Borax	Borax
Bulbus scillæ	Scilla (white variety)
Calcaria usta	Calx
Calcium carbonicum præcipitatum	Calcii carbonas præcipitatus
Calcium hypophosphorosum	Calcii hypophosphis
Camphora	Camphora
Cantharides	Cantharis
Carbo ligni pulveratus (5 % ash)	Carbo ligni
Caryophylli	Caryophyllum
Cautschuc	Caoutchouc
Cera alba	Cera alba
Cera flava	Cera flava
Cerussa (78.9 % Pb)	Plumbi carbonas
Cetaceum	Cetaceum
Chininum hydrochloricum	Quininae hydrochloridum
Chininum sulfuricum	Quininae sulphas
Chloralum hydratum	Chloral hydras
Chloroformium	Chloroformum
Chrysarobinum	Chrysarobinum
Cocainum hydrochloricum	Cocainæ hydrochloridum
Codeinum phosphoricum (2H ₂ O)	Codeinæ phosphas (1½H ₂ O)
Coffeinum	Caffeina
Cortex aurantii fructus	Aurantii cortex siccatus
Cortex cascarillæ	Cascarilla
Cortex chinæ (6.5 % alkaloids)	Cinchonæ rubræ cortex
Cortex cinnamomi	Cinnamomi cortex
Cortex granati	Granati cortex
Cortex quillaie	Quillaie cortex
Cortex thamni purshianæ	Cascara sagrada
Crocus	Crocus
Cubebæ	Cubebæ fructus
Cuprum sulfuricum	Cupri sulphas
Extractum opii	Extractum opii
Flores koso	Cusco
Flores sambuci	Sambuci flores
Folia coca	Cocæ folia
Folia digitalis	Digitalis folia
Folia sennæ	Senna indica
Folia stramonii	Stramonii folia
Folia uvæ ursi	Uvæ ursi folia
Fructus anisi	Anisi fructus
Fructus carvi	Carui fructus
Fructus colocynthidis	Colocynthidis pulpa
Fructus fœniculi	Fœniculi fructus
Galbanum	Galbanum
Gallæ	Galla
Gelatina alba	Gelatinum
Glycerinum	Glycerinum
Gossypium depuratum	Gossypium
Gummi arabicum	Acaciæ gummi
Gutti	Cambogia
Herba lobeliæ	Lobeliæ
Hirudines	Hirudo
Homatropinum hydrobromicum	Homatropinæ hydrobromidum
Hydrargyrum	Hydrargyrum
Hydrargyrum bichloratum	Hydrargyri perechloridum
Hydrargyrum bijodatum	Hydrargyri iodidum rubrum
Hydrargyrum chloratum	Hydrargyri subchloridum
Hydrargyrum oxydatum	Hydrargyri oxidum rubrum
Hydrargyrum oxydatum via humida paratum	Hydrargyri oxidum flavum
Hydrargyrum præcipitatum alhum	Hydrargyrum ammoniatum
Hydrogenium peroxydatum solutionum	Liquor hydrogenii peroxidi
Iodoformium	Iodoformum
Jodum	Iodum
Kalium bicarbonicum	Potassii bicarbonas
Kalium bromatum	Potassii bromidum
Kalium carbonicum	Potassii carbonas
Kalium chloricum	Potassii chloras
Kalium dichromicum	Potassii bichromas
Kalium jodatum	Potassii iodidum
Kalium nitricum	Potassii nitras
Kalium permanganicum	Potassii permanganas
Kalium sulfuratum	Potassa sulphurata
Kalium sulfuricum	Potassii sulphas
Kalium tartaricum	Potassii tartaras
Kreosotum	Kreosotum
Lignum guajaci	Guaiaci lignum
Liquor ammonii caustici	Liquor ammoniæ
Lithargyrum	Plumbi oxidum
Lithium carbonicum	Lithii carbonas
Magnesia usta	Magnesia levis
Magnesium carbonicum	Magnesi carbonas levis
Magnesium sulfuricum	Magnesi sulphas
Mentholum	Menthol
Morphinum hydrochloricum	Morphinæ hydrochloridum
Myrrha	Myrrha
Naphtholum	Naphthol
Natrium bicarbonicum	Sodii bicarbonas
Natrium bromatum	Sodii bromidum
Natrium carbonicum	Sodii carbonas
Natrium chloratum	Sodii chloridum
Natrium jodatum	Sodii iodidum
Natrium nitrosum	Sodii nitris
Natrium phosphoricum	Sodii phosphas
Natrium salicylicum	Sodii salicylas
Natrium sulfuricum	Sodii sulphas
Oleum amygdalarum	Oleum amygdalæ
Oleum anisi	Oleum anisi
Oleum cacao	Oleum theobromatis
Oleum carvi	Oleum carui
Oleum caryophyllorum	Oleum caryophylli
Oleum cinnamomi	Oleum cinnamomi
Oleum citri	Oleum limonis
Oleum crotonis	Oleum crotonis
Oleum jecoris aselli	Oleum morrhue
Oleum juniperi	Oleum juniperi
Oleum lavandulæ	Oleum lavandulæ
Oleum lini	Oleum lini
Oleum macidis	Oleum myristicæ

D.A.B.	B.P.	D.A.B.	B.P.
<i>Cleum menthæ piperitæ</i>	<i>Oleum menthæ piperitæ</i>	<i>Secale cornutum</i>	<i>Ergota</i>
<i>Oleum olivarum</i>	<i>Oleum olivæ</i>	<i>Semen colchici</i>	<i>Colchici semina</i>
<i>Oleum ricini</i>	<i>Oleum ricini</i>	<i>Semen lini</i>	<i>Linum</i>
<i>Oleum rosæ</i>	<i>Oleum rosæ</i>	<i>Semen myristicæ</i>	<i>Myristica</i>
<i>Oleum rosmarini</i>	<i>Oleum rosmarini</i>	<i>Semen sinapis</i>	<i>Sinapis nigræ semina</i>
<i>Oleum santali</i>	<i>Oleum santali</i>	<i>Semen strophanthi</i>	<i>Strophanthi semina</i>
<i>Oleum terebinthinæ</i>	<i>Oleum terebinthinæ</i>	<i>Semen strychni (2.5 % alkaloids)</i>	<i>Nux vomica</i>
<i>Opium pulveratum 10 %</i>	<i>Opium</i>	<i>Spiritus</i>	<i>Alcohol 90 %</i>
<i>Paraffinum liquidum</i>	<i>Paraffinum liquidum</i>	<i>Spiritus e vino</i>	<i>Spiritus vini gallici</i>
<i>Paraldehyd</i>	<i>Paraldehydum</i>	<i>Styrax depuratus</i>	<i>Styrax præparatus</i>
<i>Phenacetinum</i>	<i>Phenacetinum</i>	<i>Sulfonalum</i>	<i>Sulphonal</i>
<i>Phenylum salicylicum</i>	<i>Salol</i>	<i>Sulfur præcipitatum</i>	<i>Sulphur præcipitatum</i>
<i>Phosphorus</i>	<i>Phosphorus</i>	<i>Sulfur sublimatum</i>	<i>Sulphur sublimatum</i>
<i>Physostigminum sulfuricum</i>	<i>Physostigminæ sulphas</i>	<i>Tartarus depuratus</i>	<i>Potassii tartras acidus</i>
<i>Pix liquida</i>	<i>Pix liquida</i>	<i>Tartarus natronatus</i>	<i>Soda tartarata</i>
<i>Plumbum acetium</i>	<i>Plumbi acetæ</i>	<i>Tartarus stibiatus</i>	<i>Antimonium tartaratum</i>
<i>Pyrazolonum phenyldimethyl-</i> <i>icum</i>	<i>Phenazonum</i>	<i>Thymolum</i>	<i>Thymol</i>
<i>Radix colombo</i>	<i>Calumbæ radix</i>	<i>Tragacantha</i>	<i>Tragacantha</i>
<i>Radix ipecacuanhæ (1.99 % alk.)</i>	<i>Ipecacuanhæ radix</i>	<i>Tubera jalapæ</i>	<i>Jalapæ</i>
<i>Radix liquiritiæ</i>	<i>Glycyrrhizæ radix</i>	<i>Unguentum glycerini</i>	<i>Glycerinum amyli</i>
<i>Radix ratanhiæ</i>	<i>Kramerizæ radix</i>	<i>Vaselinum album</i>	<i>Paraffinum molle (white)</i>
<i>Radix senegæ</i>	<i>Senegæ radix</i>	<i>Vaselinum flavum</i>	<i>Paraffinum molle (yellow)</i>
<i>Radix valerianæ</i>	<i>Valerianæ rhizoma</i>	<i>Veratrinum</i>	<i>Veratrina</i>
<i>Rhizoma filiois</i>	<i>Filix mas</i>	<i>Vinum colchici</i>	<i>Tinct. colchici (D.A.B.) is to be</i> <i>dispensed</i>
<i>Rhizoma hydrastis (2.5 % hy-</i> <i>drastine)</i>	<i>Hydrastis rhizoma</i>	<i>Vinum ipecacuanhæ</i>	<i>Tinct. ipecac. (D.A.B.) [1</i> <i>(root): 10 alcohol 69 %] is to</i> <i>be dispensed</i>
<i>Rhizoma rhei</i>	<i>Rhei radix</i>	<i>Zincum acetium with 2H₂O</i>	<i>Zinci acetæ (3H₂O)</i>
<i>Saccharum</i>	<i>Saccharum purificatum</i>	<i>Zincum chloratum</i>	<i>Zinci chloridum</i>
<i>Saccharum lactis</i>	<i>Saccharum lactis</i>	<i>Zincum oxydatum</i>	<i>Zinci oxidum</i>
<i>Santoninum</i>	<i>Santoninum</i>	<i>Zincum sulfuricum</i>	<i>Zinci sulphas</i>
<i>Sebum ovile</i>	<i>Sevum præparatum</i>		

Corresponding Preparations of the German and British Pharmacopœias differing slightly in Mode of Preparation or Strength.

D.A.B.	B.P.	D.A.B. Requirements
<i>Acetum scillæ 1: 10</i>	<i>Acetum scillæ</i>	About 5 % acetic acid and 8 % alcohol
<i>Adeps benzoatus</i>	<i>Adeps benzoatus (1.5: 50)</i>	<i>Benzoin 1, lard 50</i>
<i>Aloë</i>	<i>Aloë</i>	<i>African species of aloë</i>
<i>Aqua cinnamomi</i>	<i>Aqua cinnamomi</i>	<i>Contains 8 % alcohol</i>
<i>Aqua feniculi</i>	<i>Aqua feniculi (1: 10)</i>	<i>1 in 30</i>
<i>Aqua menthæ piperitæ</i>	<i>Aqua menthæ piperitæ</i>	<i>Distilled from leaves 1 in 10</i>
<i>Aqua rosæ</i>	<i>Aqua rosæ</i>	<i>4 drops of oil in 1000 water</i>
<i>Benzolæ</i>	<i>Benzoinum</i>	<i>Siam benzoin only</i>
<i>Calcaria chlorata</i>	<i>Calx chlorinata (35 %)</i>	<i>25 % chlorine</i>
<i>Calcium phosphoricum</i>		<i>is di-calcium phosphate, CaHPO₄.2H₂O</i>
<i>Catechu</i>	<i>Catechu nigrum</i>	<i>Black catechu</i>
<i>Charta sinapisata</i>	<i>Charta sinapis</i>	<i>Black mustard deprived of fatty oil, con-</i> <i>tains 0.0119 gram of oil of mustard in</i> <i>100 square centimetres</i>
<i>Cortex citri fructus</i>	<i>Limonis cortex</i>	<i>Dried peel</i>
<i>Extractum cascaræ sagradæ fluidum</i>	<i>Extractum cascaræ sagradæ liquidum</i>	<i>Alcohol 27 %</i>
<i>Extractum chinæ fluidum 3.5 % alkaloids</i>	<i>Extractum chinonæ liquidum 4.5 %</i>	<i>Mode of preparation differs</i>
<i>Extractum filiois</i>	<i>Extractum filiois liquidum</i>	<i>Maceration</i>
<i>Extractum hydrastis fluidum</i>	<i>Extractum hydrastis liquidum</i>	<i>2.2 % hydrastine; alcohol 69 %</i>
<i>Extractum rhei</i>	<i>Extractum rhei</i>	<i>Alcohol 36 %</i>
<i>Extractum strychni</i>	<i>Extractum nucis vomicæ 5 % strychnine</i>	<i>Preparation differs; contains 16 % alkaloids</i>
<i>Ferrum reductum (90 % met. Fe)</i>	<i>Ferrum reductum (75 % met. Fe)</i>	
<i>Ferrum sulfuricum</i>	<i>Ferri sulphas</i>	<i>Precipitated by alcohol</i>
<i>Ferrum sulfuricum siccum (30.2 % Fe)</i>	<i>Ferri sulphas exsiccatus</i>	<i>Prepared from the above</i>
<i>Flores rosæ</i>		<i>Rosa centifolia</i>
<i>Folia belladonnæ</i>	<i>Belladonnæ folia</i>	<i>Dried leaves; 0.3 % hyoscyamine</i>
<i>Folia hyoscyami</i>	<i>Hyoscyami folia</i>	<i>Dried leaves; 0.07 % hyoscyamine</i>
<i>Fructus capsici</i>		<i>Capsicum annuum</i>
<i>Fructus cardamomi</i>	<i>Cardamomi semina</i>	<i>The whole fruit</i>
<i>Kali causticum fusum</i>	<i>Potassa caustica</i>	<i>85 % KOH</i>
<i>Lignum quassia</i>	<i>Quassia lignum</i>	<i>Picramnia excelsa and Quassia amara</i>
<i>Lignum sassafras</i>	<i>Sassafras radix</i>	<i>Wood only</i>
<i>Liquor plumbi subacetici</i>	<i>Liquor plumbi subacetatis fortis</i>	<i>Sp. gr. 1.235 to 1.240</i>
<i>Mel depuratum</i>	<i>Mel depuratum</i>	<i>Process differs</i>
<i>Natrium carbonicum siccum</i>	<i>Sodii carbonas exsiccatus</i>	<i>To contain 74.2 % anhydrous Na₂CO₃</i>
<i>Oleum sinapis</i>	<i>Oleum sinapis volatile</i>	<i>Synthetic oil</i>
<i>Oxymel scillæ</i>	<i>Oxymel scillæ</i>	<i>Proportions differ slightly.</i>
<i>Paraffinum solidum</i>		<i>Ceresin</i>
<i>Pepsinum</i>	<i>Pepsinum (1 to 2500)</i>	<i>1 to 100 dissolving power</i>
<i>Podophyllinum</i>	<i>Podophylli resina</i>	<i>"Precipitated by water"</i>
<i>Pulvis ærophorus laxans</i>	<i>Pulvis sodæ tartarata effervescens</i>	<i>Sod. pot. tart. 7.5, sod. bicarb. 2.5,</i> <i>acid. tartar. 2 grams</i>
<i>Pulvis liquiritiæ compositus</i>	<i>Pulvis glycyrrhizæ compositus</i>	<i>Proportions differ slightly</i>
<i>Radix gentianæ</i>	<i>Gentianæ radix</i>	<i>Gentiana lutea and others</i>
<i>Resina jalapæ</i>	<i>Jalapæ resina</i>	<i>Mode of preparation differs</i>
<i>Rhizoma zingiberis</i>	<i>Zingiber</i>	<i>Not scraped</i>
<i>Sapo kalinus</i>	<i>Sapo mollis</i>	<i>Made with linseed oil</i>
<i>Spiritus ætheris nitrosi sp. gr. 0.840—0.850</i>	<i>Spiritus ætheris nitrosi sp. gr. 0.838—0.842</i>	<i>Mode of preparation differs</i>
<i>Spiritus camphoratus 10 %</i>	<i>Spiritus camphoratus 11.8 %</i>	<i>Alcohol 70 %</i>
<i>Spiritus dilutus</i>		<i>Alcohol 69 to 68 %</i>
<i>Spiritus juniperi</i>	<i>Spiritus juniperi</i>	<i>Distilled from fruit</i>
<i>Spiritus lavandulæ</i>	<i>Spiritus lavandulæ</i>	<i>Distilled from flowers</i>
<i>Stibium sulfuratum nigrum</i>	<i>Antimonium nigrum purificatum</i>	<i>Not purified</i>
<i>Succus liquiritiæ depuratus</i>	<i>Extractum glycyrrhizæ</i>	<i>Prepared from crude extract</i>

Corresponding Preparations of the German and British Pharmacopœias differing only in Strength.

D.A.B.	B.P.	10 grams of D.A.B. correspond to B.P. grams
Acidum aceticum 96 %	Acidum aceticum glaciale 99 %	9.7
Acidum aceticum dilutum 30 %	Acidum aceticum 33 %	9.0
Acidum hydrochloricum 25 %	Acidum hydrochloricum 31.79 %	7.8
Acidum hydrochloricum dilutum 12.5 %	Acidum hydrochloricum dilutum 10.58 %	11.8
Acidum nitricum 25 %	Acidum nitricum 70 %	3.5
Acidum phosphoricum 25 %	Acidum phosphoricum conc. 66.3 %	3.7
Acidum sulfuricum dilutum 15.95 %	Acidum phosphoricum dilut. 13.8 %	18.1
Liquor ferri sesquichlorati 10 % Fe	Acidum sulphuricum dilut. 13.65 %	11.6
Liquor kali caustici 15 %	Liquor ferri perchloridi fortis 15.84 %	6.3
Mucilago gummi arabici 1 and 2	Liquor potassæ 5.85 %	25.6
Oleum camphoratum 10 %	Mucilago acaciæ 1 and 1.5 %	8.3
Oleum camphoratum forte 20 %	Linimentum camphoræ 21.45 %	4.6
Sirupus ferri iodati 5 %	Linimentum camphoræ 21.45 %	9.3
Sirupus simplex 60 %	Syrupus ferri iodidi 7.25 %	6.9
Spiritus æthereus 1 and 3	Syrupus 66.6 %	9.0
Spiritus menthæ piperitæ 10 %	10 grams D.A.B. = 8.15 grams spirit. ætheris and 1.85 gram alcohol 90 %	—
Vinum stibiatum 0.4 %	Spiritus menthæ piperitæ 10.7 %	9.3
	Vinum antimoniale 0.45 %	8.8

Tinctures by Maceration.

D.A.B.	B.P.	10 grams D.A.B. = B.P. grams
Tinctura aconiti 10 %	Tinctura aconiti 5.5 %	18.0
Tinctura cantharidum 10 %	Tinctura cantharidis 1.5 %	66.6
Tinctura capsici 10 % (C. annuum)	Tinctura capsici 5.5 %	18.0
Tinctura chinæ 0.74 % alkaloids	Tinctura cinchonæ 1.1 %	7.4
Tinctura cinnamomi 20 %	Tinctura cinnamomi 22 %	9.0
Tinctura colchici 10 %	Tinctura colchici seminum 21.2 %	4.7
Tinctura digitalis 10 %	Tinctura digitalis 13.6 %	7.3
Tinctura myrrhæ 20 %	Tinctura myrrhæ 23 %	8.7
Tinctura opii benzoica	Tinctura camphoræ composita	Morphine-content almost identical, other proportions differ.
Tinctura opii simplex 1 % morphine	Tinctura opii 0.77 %	13.0
Tinctura ratanhiæ 20 %	Tinctura kramerisæ 22 %	9.0
Tinctura scillæ 20 %	Tinctura scillæ 21 %	9.5
Tinctura strophanthi 10 %	Tinctura strophanthi 2.8 %	35.6
Tinctura strychni 0.25 % alkaloids	*Tinctura nucis vomicæ 0.28 % strychnine	4.5
Tinctura zingiberis 20 %	Tinctura zingiberis 11 %	18.1
Unguentum acidi borici 10 %	Unguentum acidi borici 10 %	} All made with white vaseline
Unguentum hydrargyri album 10 %	Unguentum hydrargyri ammoniati 10 %	
Unguentum hydrargyri rubrum 10 %	Unguentum hydrargyri oxidi rubri 10 %	

* Assuming that strychnine and brucine are present in equal proportions.

MEDICAL GLEANINGS.

Malignant Tumours.

DR. G. FICHERA, of Rome, has recently introduced injections of homogeneous products of foetal autolysis as a treatment in cases of malignant tumours. So far, thirty-six cases have been submitted to the treatment, and of half the number who followed up the treatment with regularity and perseverance, ten have experienced beneficial effects. Particulars are given in a recent issue of "The Lancet."

Neglected Remedies.

At a meeting of the Hunterian Society ("British Medical Journal," 1911, II., 1289) Dr. R. Hingston Fox, in a presidential address, spoke of present-day reliance on ready-made medicines, and pointed out that the old plan of selecting and combining the appropriate remedies for each patient is becoming less and less a rule. Some well-tried and useful remedies are in danger of being forgotten. Among them are emulsions, once commonly employed in catarrhal conditions, in which almond or tragacanth furnishes a soothing and healing menstruum for the drugs. In diarrhoea, again, the warm and stimulating antiseptic properties of the aromatic chalk powder now seldom find a place, while sulphuric acid, so useful in severe forms of intestinal flux, is seldom supplied. Gentian, calumba, and quassia are still used freely, but chamomile, a warm stimulant of much value, has fallen out of use. Aromatic bitters, like cascarilla and cusparia, have also lost favour, though helpful as cordial tonics in bowel conditions. The antispasmodic, an old-fashioned term, connotes a class

of aromatics with a peculiar and unpleasant taste. Of these valerian is still much used, and musk is still called for when a patient is dying of pneumonia; but asafetida, galbanum, sumbul, and caput are very seldom prescribed; the bromides have ousted them. Yet the reflex effect of a good dose of asafetida in a case of hysteria with muscular spasm has often been signal.

Aids to the Digestion.

"THE LANCET," 1911, ii., 1551, reports a communication to the Royal Society of Medicine by Dr. F. Craven Moore and Dr. H. E. Allanson on "The Influence of Certain Accessory Foodstuffs on Gastric Secretion," which described experiments which they had made upon fifteen individuals in regard to the effect which certain beverages have upon gastric secretion. A simple meal of flour "breakfast biscuits" and 10 oz. of fluid was taken. Water, tea, coffee, cocoa, milk, albumen, and meat-extract were used as the fluids, and it was found that the total acidity of the gastric solution with water was 68.7 and the peptic activity 7.3, whereas with tea the total acidity was 71.6 and the peptic activity 8; while with meat-extract the total acidity was 85.6 and the peptic activity 9. Coffee is better than tea as a gastric stimulant. It was used in six cases only, but the total acidity was from 52 to 97 and the peptic activity from 6 to 11. The woman who gave the lowest figure showed only 52.7 and 5 with water and 56.6 with tea, while with meat-extract she showed 73.3 and 6.2. Alcohol and tobacco have very little effect upon the figures, which generally may be taken to mean that consommé to begin a meal and coffee to finish it are rational and scientific, as they stimulate the digestive peptic glands.

POTTER & CLARKE'S CENTENARY.

Showing how in the course of four generations the Leech, Herb, and Seed Business established in 1812 by Henry Potter has grown; with graftings of Factories and packing arrangements that now occupy five Establishments of Potter & Clarke, Ltd., in London, a branch in Manchester, and Herb Farm at Carshalton.

THIS year Messrs. Potter & Clarke, Ltd., wholesale and export druggists and manufacturing chemists, celebrate the centenary of the establishment of their business. It is an event which deserves a niche in the history of

removed. Mr. Hailey retired from the partnership eight years later, and Mr. Potter continued the business, that of importer of leeches, dealer in Turkey sponge, herbalist, etc., at the Market address, and as florist and seedsman



MR. R. C. WREN.



ALDERMAN H. POTTER, J.P.



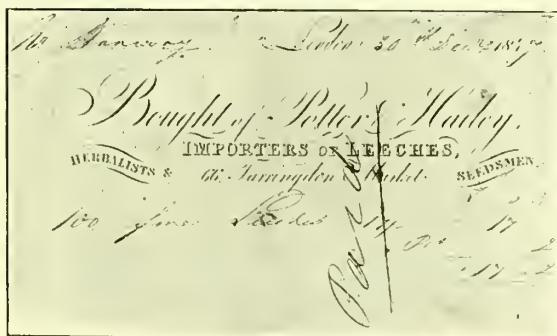
MR. H. A. POTTER.

British pharmacy, especially as the firm's business embodies from the beginning to the present dealings in medical supplies which characterise different periods of the century, while in its developments the work of the firm illustrates the changes which have occurred in the retail drug trade.

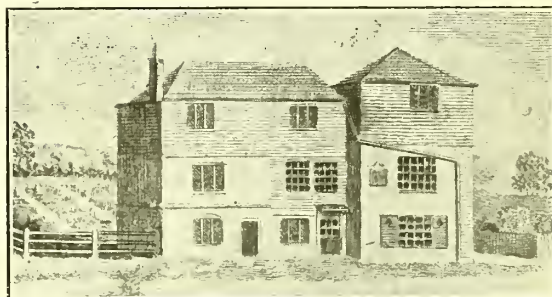
ORIGIN AND PROGRESS OF THE BUSINESS.

From 1812 to the present day the business has been associated with Farringdon Street, London, where at No. 54 there is still a branch, left there as a tribute to the founder of the business—Mr. Henry Potter, who, in 1812, established himself as a leech importer, herbalist and seedsman, in Fleet Market, Farringdon Street. That was a time when the leech was a panacea in human ailments, and the demand so constant that Henry Potter kept his reserve stock in several large ponds at his residence on Brixton Hill. His successors of the present day are the

at 65 Farringdon Street. A tag label from a parcel of buckbean herb, sent in 1859 to Mr. Gordelier, Sittingbourne, confirms the two addresses. In 1862 Henry Potter *tertius*, son of the principal, and the present Mayor of Stepney, completed his education at the City of London School, and was apprenticed to his father, eight years later being made a partner, the firm name becoming Potter & Son; the next change in the latter respect being in 1873, when Charles Goddard Clarke, son-in-law of the senior partner, joined the firm, which thus became Potter, Son & Clarke. It will be remembered that Mr. Clarke was member of Parliament for Peckham at the time of his death in 1908. Owing to the death in 1880 of Henry Potter, *secundus*, the name of the firm then became Potter & Clarke. In course of time the Farringdon Market premises became insufficient for the wholesale department, which was removed to a warehouse in Duke Street, Spitalfields (the shop in Farringdon Street being retained), afterwards



REDUCED FACSIMILE OF 1847 INVOICE.



NICHOLAS CULPEPER'S HOUSE.

Situated in herb-gardens, wherein the firm's headquarters are now.

largest importers of leeches, but a jar suffices for their stock. The leech made Henry Potter's fortune, and in 1846 he sold his business to his nephew, Henry Potter *secundus*, and Mr. George Hailey, an old apprentice, who carried it on under the firm name Potter & Hailey, at 66 Farringdon Market, whence the Fleet Market had been

to 75 Weston Street, Bermondsey, and in 1890 to the present premises at 60, 62, and 64 Artillery Lane. A new wing to this building has recently been added, as we presently relate.

The next change in the *personnel* of the business was in 1896, when Henry Potter *quartus* (Mr. H. Arthur Potter,

Ph.C.), who had studied at the School of Pharmacy, Bloomsbury Square, son of Alderman Henry Potter, and Mr. Richard C. Wren, general manager, became partners in the firm. On October 1, 1907, the business was incorporated as Potter & Clarke, Ltd., with capital of 50,000*l.*, and the partners as directors. Meanwhile a warehouse in Fort Street, a laboratory in Casson Street, and drug-mills in Fairclough Street, Whitechapel, had been added to the business organisation.

A HISTORICAL SPOT.

Thus it will be seen that there has been a Henry Potter in the business from the beginning, the connection with the place of origin 100 years ago is retained, and, most interesting to note, the Artillery Lane premises are in the very centre of the old herb-gardens of London, recalled by such thoroughfares as Camomile Street and Wormwood Street, and Nicholas Culpeper's house was across the street, and Nos. 62, 64 and 66 stand somewhere in his garden. This picture of the house is made from an engraving in Potter & Clarke's possession of Culpeper's portrait and house. All that is known about the house is told in Wootton's "Chronicles of Pharmacy"; it is not concerned with the present narrative, except as an unusually interesting circumstance that the principal herb business in the United Kingdom is now situated where Culpeper, a mighty exponent of herbs, once lived.

In the course of time Messrs. Potter & Clarke have come to be more than herb-dealers, and this description of their

tivity for each customer while waiting. When Messrs. Potter & Clarke commenced to put up packets to retail at 1*d.*, 3*d.*, and so on, they never anticipated that this would outstrip the big business they had done in bulk packages, but it has, and has led on to packing many other kinds of goods, medicinal and domestic, bringing in its wake the



A GLIMPSE IN A PACKING FLOOR.

A dozen pictures like this would be required to illustrate fully the arrangements for packing herbs in Artillery Lane.

manufacturing department requisite for the packers' supplies.

Britain's consumption of herbs is enormous. Thousands of grosses of penny packets of the "Winged Lion" brand are put up by Messrs. Potter & Clarke yearly. Every month hundreds of grosses of packets of medicinal herbs are sent out, besides culinary or sweet herbs. All the packing is done in this place by women, who weigh the herb, make the packet, and finish it with astonishing celerity. Then three dozen of the packets are put into a carton, and racked ready to fill orders daily. We noted that promiscuity is avoided in the packing-rooms, as it is throughout the building, *i.e.*, roots, barks, and seeds are kept and packed in rooms separated from those devoted to herbs, leaves, and flowers, so that contamination is avoided.



THE HEADQUARTERS VIEWED FROM BELL LANE.

four distinct sets of premises shows the varied nature of the present-day business, with its preparatory and manufacturing processes, which have been added since the eighties, up to which time the business was a herb, leech, and seed one, pure and simple, chiefly wholesale; then, as trade changed and new methods were introduced, the firm adapted themselves to these, leading when they could. Thirty years ago, when Mr. R. C. Wren went to the firm, after an apprenticeship to the seed trade, he was one of a staff of ten; to-day about 250 names are on the pay-roll, and the number is increasing monthly.

THE HEADQUARTERS

of the business are, as already indicated, in Artillery Lane. Our view is taken from Bell Lane, the exit of the premises, the entrances being in Artillery Lane on the right. The whole of the premises were altered or reconstructed during 1910 and 1911, the wing with chimney to the left being the last addition. The upper entrance in Artillery Lane is for receiving goods, and the lower is the office entrance, lighted by the windows on Bell Lane and on Artillery Lane. Entering the latter one walks into a waiting-room to the left, and correspondence-office, which communicates with the directors' and secretary's rooms in the front. On the right are a buying-office, book department, and ledger-office. There are three floors above, and a basement below.

Ascending to the top floor we walk through well lighted stock-rooms, which are devoted to packed herbs, and the packing thereof. This business originated less than thirty years ago. Before that the firm were only asked for herbs in bulk, and retailers weighed and tied up each little quan-



GLIMPSE IN DRUG WAREHOUSE.

Showing style of the drug-bins, so convenient to get at.

Seidlitz-powder making and packing have a place for themselves. The addition to the Artillery Lane premises has given the firm much-needed room for the packers, who in the mild weather can work with open windows and have the advantage of airing themselves on the roof outside.

On the same floor perfumes, culinary essences, cachous, seeds, and lozenges are stored and packed, each room

being a centre of interest, perhaps none so remarkable as the lozenge-room, considering what the business of the first Henry Potter was. There we found midget cachous, 2,000 to the ounce and in contrast huge quantities of linseed liquorice and chlorodyne lozenges and Five Bark Jubes. All these are brought from the factory in Fairclough Street



A GLIMPSE IN THE "WETS."

There is a duplicate of this below which is reached by the stairway.

in bulk, and packed here in decorated tins. Tons of them are sold weekly; the October sales of the jubes amounted to 15 tons. That is the result not only of the jubes being good, but of the makers' policy of helping retailers to sell them.

Descending to the floors below we again come to small armies of girls and women packing herbs, each with her wooden mould on which she makes the carton, then inserts it into a hollow wood block, pours into it the weighed herb, presses down and closes. It is done by piecework, and all the packers make good wages, some especially so. It is nice work for women, many of whom come all the way from Peckham. Other styles of packing are employed, e.g., tins for dandelion coffee and asthma-cure, and the methods of handling vary when compound herbs are packed, a



PACKING DEPARTMENT.

A good export business as well is done.

soupcou of one or more ingredients being added to the basic mixture as required.

A number of apartments on this floor are devoted to the storage of drugs in bins, drums, and other receptacles, the method of storage being such as to expedite work. One of our illustrations shows the arrangement of open bins, which enables the worker to get straight at whatever drug

he requires. These open bins are not expensive to make, and are used only for drugs which do not spoil by exposure, however short that may be, for in this case the bins are replenished from the reserve stocks every few days. Roots and seeds are kept quite away from herbs, leaves, and flowers. The firm grow many herbs at their own farms at Carshalton, and buy such things as parsley in the open London market, but supplies are drawn chiefly from countries to which drugs are indigenous, such as the Continent of Europe, the United States, and Canada. They have practically their own organisation for collection on the Continent, their agents instructing the gatherers and paying them for the herbs as they bring them in in the proper seasons. Most of the lavender-flowers used—and tons are required annually for sachets and other perfumed compounds—are purchased from Spain, as they are found to be the most odorous.

One can gather some most interesting facts in a place like this, especially in conversation with a man of such wide experience as Mr. Wren. The everyday pharmacist who does not specialise in the herb trade has little opportunity of knowing the number and variety of these nature remedies which are still employed in this country. Such old favourites as coltsfoot-leaves, bittersweet, box-leaves, cinquefoil, clowns-wort, golden-rod, and hops one would



ORIGINAL PACKAGES.

Less than a score of serons, bales, and bags, can be counted in this picture, but the Fort Street warehouse contains about a thousand.

expect to be in big demand (the firm grow the golden-rod at their own farm for surety of supply), but when one hears of the huge consumption of raspberry-leaves by English women of the working classes to ease parturition, it is a surprise. Yet here we have ocular demonstration of the public demand in the thousands of packages which are put up.

Descending to the next floor we find that it is devoted to the storage and packing of powders, and so busy is the department that already soon after extension it threatens to become as congested as the "Wet" department, of which we give a picture of one side. An annexe of the "Wets" is a compounding department, where an experienced chemist makes preparations casually required, and also controls, by analysis, the quality of the products stocked. The department extends to the basement, which is reached by a staircase. Here also are the working stocks of oils (the firm are direct importers of eucalyptus oil), and a bottle store, besides the packing department from which all the goods go out by way of Bell Lane. The whole of the premises are heated by steam—the apparatus for the production of this and for the provision of hot water for bottle-washing is placed under Bell Lane. It is worth noting that this apparatus consumes all the rubbish that gathers every working day.

FORT STREET WAREHOUSE.

One drug warehouse is very much like another, but the five-floor one which Messrs. Potter & Clarke have in Fort Street, Spitalfields, differs in some respects from the conventional, in so far as non-pharmacopoeial medicinal herbs

and drugs are to be found here in large quantities. The warehouse is entirely devoted to storage purposes, not less than a thousand bales of crude material being on the premises. A few women are engaged in rubbing sage and picking leaves, such as senna, but otherwise the store is the raw material feeder of the Artillery Lane place, and the laboratories of the firm, besides the source from which wholesale orders are sent out.

THE LABORATORIES.

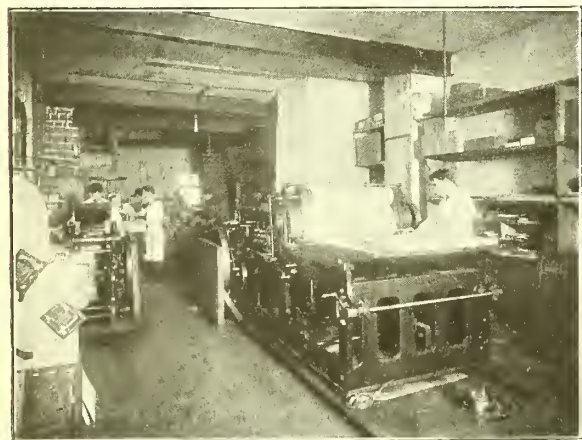
Ten years ago Messrs. Potter & Clarke purchased freehold premises at Casson Street, Whitechapel, which are



STEAM LABORATORY.

A corner in Casson Street, showing jacketed copper pans with stills in the background.

now devoted to the production of galenical preparations, such as extracts (solid and liquid), tinctures, ointments, pills, tablets, capsules, and kindred articles, besides printing and certain departments of packing. The premises were damaged by fire in June 1906, and in rebuilding the firm extended them considerably. To the right on entering are the steam laboratories, where the customary operations of a manufacturing pharmaceutical laboratory are carried on, many of the drugs extracted being eclectic or herbal in character. On the occasion of our representative's visit, extracts of phytolacca, thuja, and poplar buds were in process of manufacture, and in the case of the two latter the alcoholic menstruum was being distilled prior to



PRINTING DEPARTMENT.

A power machine is seen in the foreground.

final evaporation. Herb beer extract was another preparation in process, while fluid extracts of uncommon vegetable drugs are here made in infinite variety. A large hydraulic press and more steam-jacketed pans complete the equipment of this laboratory.

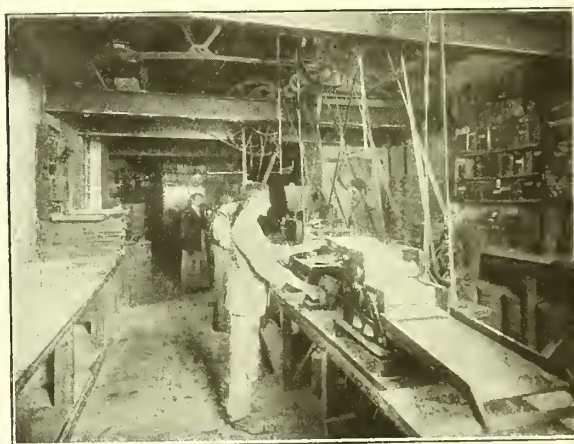
The building on the right consists of three floors, and in one of the store-rooms on the ground floor a large number of out-of-the-way solid extracts are seen on the shelves. Mr. Wren informed our representative that most wholesale houses in this country buy from them, the demand made upon each being too little to warrant their manufacture in



PILL-MAKING DEPARTMENT.

Sugar-coaters are seen in the foreground.

quantity unless by such a house as this with a special connection. On this floor there is a percolating laboratory for fluid extracts; tinctures are made on the second floor. Here again the out-of-the-way character of the drugs strikes one forcibly. The importance of accurate knowledge of therapeutic efficiency, as well as the commercial origin of drugs on the part of manufacturers, is well illustrated in tincture of cactus (*Cereus grandiflorus*). In a recently published English work it is stated that this medicine consists of the dried young shoots and flowers of the plant, but as a matter of fact the drug loses its peculiar cardiac activity on drying, and for that reason Messrs. Potter and Clarke have it gathered fresh in Mexico and immediately put into bottles, which are straightway filled with spirit, closed, sealed, and exported. From this a tincture is obtained which has the correct action upon



PILL-MAKING DEPARTMENT.

A pill-sorter is seen in front. After cut pills have been put through a rounding-machine they are placed on this sorter, when gravitation, shaking, and their shape determine whether or not they will reach the final goal of perfect pills.

the heart—a good example of the care exercised by the firm in obtaining supplies of raw materials. In another and isolated part of the premises a room is solely devoted to the preparation and packing of asthma-cure.

The printing department produces a most creditable variety of printing; for example, a net wholesale price list

of vegetable and flower seeds (for the season we are now entering upon); labels for shop rounds in two colours; show-cards; carton outers for herbs, lozenges, jubes, and cachous (some of these in several colours and gold); and the printing on the silk-like cover of a corn-cure. An



EDGE RUNNER MILL.

Grinding *Pinus canadensis* in its own apartment.

idea of this department is given in the photograph. The firm started printing in a small way the names and addresses of retailers on labels, and have steadily developed the department to its present efficient state.

The pill floor was next visited. Here pills are massed, cut, rounded, and coated. Compressed tablets are also manufactured. The two photographs relieve us of description, but we may state that this floor is one of the busiest places in the Casson Street laboratories, and the firm's output of pills is quite a business in itself. In an annexe to this floor women are employed in bottling specialties, such as composition essence, compound syrup of hypophosphites, and the like. The firm do a great deal of this for retailers who want "Own-name" preparations, and also for the proprietors of certain special preparations. An important feature of this department is the filling of ointments and kindred products in enamelled tins. The empty tins are placed in flat wooden trays, each of which holds about 200, and as girls fill up the tins in each tray



CACHOUS AND LOZENGES.

Each packer works at her own counter enclosure, all the materials that she requires being placed conveniently beside her.

another trayful is put on the top of it, and so on, the work being done with great celerity. We calculate that one girl can fill five shillingworth of cold-cream in penny tins in the time that it takes a man to put a pennyworth into a chip box. That is the moral of the packing trade to-day. It saves the time of experienced persons who should employ themselves more profitably in the pharmacy.

It was also noted that medicated wines are bottled on this floor, the wine being drawn from the cellar by a force pump similar to that used at beer bars, the object being to bottle the wine in the clear condition which it attains in the cold cellar. We observed that convenient nooks on the premises are utilised for what may be called small



FIVE BARKS JUBE HOUSE.

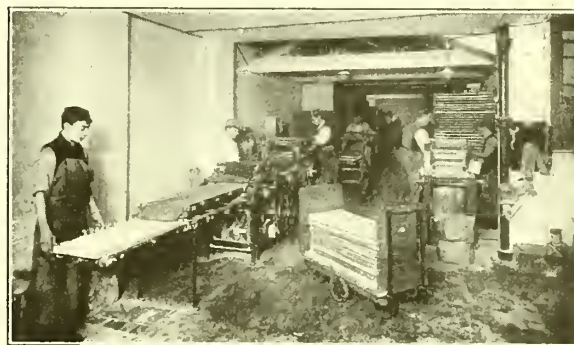
The photograph shows the cutting machines. The boiling house is at the back. After the mass is compounded it is poured into trays and dried. The dried sheets are passed through the machines seen in the foreground, and, after cutting, are crystallised with sugar.

operations, such as the making of medicated bougies, pessaries, and suppositories.

Other kinds of goods are packed in these Casson Street premises, and the equipment, the staffing, and the processes employed are a demonstration of Messrs. Potter & Clarke's efficiency in this branch of modern enterprise.

MILLS AND LOZENGE FACTORY.

Fairclough Street is situated in Whitechapel, five minutes' walk from Spitalfields. There, Messrs. Potter & Clarke purchased a few years ago an old-established grinding business, but the premises were seriously damaged by fire on September 17, 1910. This misfortune has been turned to good account by the re-building of the premises, which form a quadrangle. The new part of the premises is opposite the entrance, and consists of a warehouse of three floors and basement. The driving-power for the mills, disintegrators, etc., is provided by two electric motors of 20 h.p. each. The mills are as far as possible enclosed each in its own apartment. Edge-runners, such as



LOZENGE-CUTTING MACHINE.

It is fed with lozenge-mass, which is carried along and cut into lozenges, each one being stamped with the name desired

that figured, prevail, but there is also centrifugal apparatus for the powdering of sugar, disintegrators for such things as lobelia, and other forms of comminators for extracts, with accessory apparatus for sifting and accommodation for drying. In construction, the premises have been made as far as possible fireproof, grinding being apt to lead to explosion and fire.

The floor above is devoted to the packing of lozenges and cachous. In the picture that we show of this floor it will be noted that some of the workers are engaged in rolling lozenge-paste, for the more delicate operations of this nature are conducted by women. As indicating the care taken in packing, it was observed that a pennyworth of Brompton Hospital cough-lozenges is weighed, packed in grease-proof paper, then placed in a carton, and the lot sells by the firm at 8d. per dozen.

Several apartments in the new and old buildings are devoted to lozenge-making and packing, and in the last photograph we show a lozenge-cutting machine, which is fed with lozenge-paste at one end and turns out finished lozenges at the other ready to be taken to the drying-rooms. A special room is set aside for first-class and white work. One floor is entirely devoted to the manufacture of five-barks jubes—an astonishingly popular winter confection, for which special machinery has been laid down that enables the firm to produce the jubes at the rate of a ton per day. High-pressure steam is used in the boiling-pans, which are of special construction, and it may be said that at this season of the year everyone employed in the making of these jubes has to work at high pressure also.

Such are, in the barest outlines, the principal departments of Messrs. Potter & Clarke's activity. The Then and the Now of their business show that the energies of the present generation have carried it into paths unknown to the first and second generations. They are all workers: that is one reason for their remarkable progress. They are backed up by most willing staffs inside and outside London—that is a second reason. Last, but not least, they have abounding faith in the drug-trade and its possibilities, and have never been afraid to put money into plant and projects, feeling that in this way only could they get the full fruit of their energies.

A Hundred Years Ago.

Parish Registers have yielded to modern research valuable material for writers of history. Old prescription-books in our pharmacies may yet do the same for the history of medicine and pharmacy. In this article Mr. Arthur E. Boyley, of Highgate, London, gives an account of the contents of a prescription-book commenced in 1813 in the pharmacy now owned by his brother and himself.

SOME old books, mouldering and forgotten in a corner of the cellar, but turned out recently in a passion of whitewashing, are responsible for this article. On cleaning them up and treating them with reverence, they proved to be the prescription-books, ledgers, and cash-books belonging to the "Highgate Pharmacy," which was established in 1802 and is "still running." The cash-books go back to the early 'fifties, and reveal the names of Maw, Newbery, and Barclay among others. The prescription-books were old even at that time, for the earliest prescription in the oldest book is dated May 10, 1813, two years before the battle of Waterloo. It is a curious old volume, well preserved and beautifully written. Page after page looks as if it had been engraved rather than hand-written, the ink is still black and shining, up-strokes thin and down-strokes thick, and the paper, though soiled at the edges, has kept perfectly—thin and yellow and fine, like parchment. Here and there a later comer has made alterations and additions in a totally different handwriting, and these rude interruptions are "like sweet bells jangled out of tune and harsh." Each prescription is ruled off in red, with prices marked in code at the side, and the pages are headed boldly with the date thus:

Novembris Die 12mo, 1829.

The first book was left half-empty in the 'twenties, forsaken for a huge leather-covered tome which holds twelve years' prescriptions. After that time they reverted to the earlier book—and spoiled it! The ink of the later period has faded in places much more than that of the

earlier part, and the handwriting varies greatly as different assistants have taken up the tale. One of the assistants in the 'fifties was an artist, for at the foot of each page where there was no room to squeeze in a prescription he drew various sketches to fill up the spaces. A cat chasing a mouse, an ornamental dagger, an impossible pestle and mortar, two men crossing swords, and the Masonic square and compasses are some of them.

The names of ladies who figure in the book suggest the Georgian period: Jemima, Louisa, Georgina, and Caroline are examples. Quaint notes, too, are written beside the scrips. The chemist in possession of 64 High Street, Highgate, in 1820 was a Mr. Dunn, and against a cough-linctus in the book is written, "Mrs. Dunn's cough-mixture for Eliza," doubtless the domestic of that day. There is also a prescription containing, among other ingredients, pulv. colchici, and the doctor, worthy man, after giving full directions in extended Latin for mixing the powders, adds in English for the benefit of the patient. "My friend, Mr. Dunn, will be particular about the colchicum!"

There is no great difference between the drugs used then and now. Gums, resins, and vegetable powders were very common. There were no elixirs or elegant preparations in those days. Nux vomica does not occur at all, and sodæ bicarb. only occasionally. Infusions and decoctions were the vehicles of most mixtures. Draughts, mainly of the nature of mist. sennæ co., were much used, and a powder frequently prescribed was a mixture of rhubarb, ginger, and magnesia—practically Gregory's powder. But there are no prescriptions in the book for patent medicines or proprietary articles. Recipes were written for very irregular quantities, and ad was not often mentioned. Seven ounces of infusion in one case is ordered, with 3 drachms and 2 drachms of tinctures; in another case 5 oz. of decoction with 4 drachms and 6 drachms of tinctures. When the powdered ingredients are given from which an infusion is to be made, the water necessary is written in pounds, and not in fluid ounces or pints.

Many things are ordered which now are rarely used—e.g., manna, almond emulsion, hops, and gum myrrh in mixtures. "The cortical part of sarzaparilla" is one request; "Hirudines, mitte xv." is another. Leeches were in frequent demand. Prescriptions in many cases are signed by initials followed by "chirurg." All the directions are written out in full Latin. I quote some for the benefit of pharmacy students:

For a plaster—"Liquefac resinam cum cera et tunc imisce bene Ext. Belladonnæ dein extende super alutam ut fiat emplastrum hujus magnitudinis."

For a powder—"Tere pulverem Colchici cum Sulphate Sodæ in pulverem subtilissimum, dein adde Ammoniaci subcarbonatæ ut fiat pulvis unus."

For an eye-wash—"Fiat collyrium pauxillo cujus lavantur oculi sæpius."

For pills—"Fiat massa in pilulas No. 45 formanda. Signetur sumat pilulas duas hora somni quando opus fuerit."

To make a gout tincture—"Digetur dies quatuordecim et cola per chartam."

For an electuary—"Fiat electuarium cujus sumat quantitatem nucis myristicæ primo mane bis in Hebdomadâ."

Mixture and pills—"Quarum sumat duas sexta quaque hora et superbibat cochlearia tria majora misturæ sequentis."

Miscellaneous phroses—"Conterantur probe simul." "quam accuratissime," "contunde et divide," "tere omnia simul diligentissime," "adhibenda sæpiissime," "ante prandendum quotidie," "agita simul paulisper."

One of the proprietors of the pharmacy evidently did a good deal of prescribing, for numbers of prescriptions copied in the book bear the heading "Homo Incog." All the prescriptions are priced, but in letters of a code, and the code word had to be found by finding as many letters as possible and guessing the prices approximately to find their position in the word. Some of the prices may be interesting, though they are very much the same as those of the present day:

Mixtures with decoctions or infusions, 2s.: ordinary mixtures, 1s. 6d.; pills, 9d. or 1s. a dozen; 12 powders, 1s. 6d.; 2 oz. electuary or ointment, 1s.; 8 oz. liniment, 4s. 6d.; 2-oz. draught, 1s., and 6 such, 4s. 6d.; 10 oz.

currie-powder in a bottle is charged 5s. 6d. The following will show the price of various ingredients :

1½ oz. Senna Leaves	9d.
2 drachms Bruised cloves	3d.
7 oz. Sulphate of Magnesia	7d.
1 oz. of Manna	8d.
1 lb. of Boiling Water.	
Infuse these four hours and strain them, then add	
1½ oz. Tincture of Senna	6d.
2 drachms Sal Volatile	2d.
	3/6

Dec. 31st, 1834.

How good it would be if we are allowed to work out costs in this way under the Insurance Act! There are quite a number of family recipes for LAVENDER-WATER, and S.V.R. was cheap in those days. Here is one :

½ pint Spt. Wine	2 0
3 drams Ess Oil of Lavender	1 6
3 — Oil Bergam	1 0
2 — Ess Ambergris	9
2 — Musk	8
½ — Nutmegs	6
Bottle	3
	6 8

July 6th, 1822.

Here are a few curious recipes. One of the first in the book, dated November 10, 1813, is this :

WASH FOR THE SKIN.—4 oz. each of Potash and Rose Water, 2 oz. each of Brandy and Lemon Juice. Dissolve the Potash in the Rose Water then add the Lemon Juice, which will cause an effervescence, put together into two quarts of water and when you wash put a spoonful or two into the basin.

Another :

Pulveris Stanni ʒj.
Sulphuris Precipit ʒss.

6 Powders 1s. 1829.

THE EARL OF MANSFIELD'S TOOTH POWDER: 1 oz. each of Bole Armeniac and Dragon's Blood, ½ oz. each of Orris root and Red Coral.

For this the noble lord paid 2s.

Here is another :

1 oz. Gum Myrrh very finely powdered, 4 oz. Bole Armeniac very finely powdered, add by degrees 2 drams Essential Oil of Rosemary dissolved in one ounce of rectified Spirits of Wine, all to be well mixed together in a marble mortar and made into an electuary.

This Tooth Paste was charged 3s. in a pot with cover. (Maii die 11^o, 1830.)

1 Teacupfull Laudanum, 2½ teacupfulls dilut Vitriolic Acid, 1 pint of Treacle, 1 teacupfull of warm water, boil it all on a slow fire and skim it as it rises; when cold it is fit for use, a tablespoonful is a sufficient quantity night and morning. (Price 1s. 6d.)

Acidi Nitrici, Acidi Muriatici, aa. ʒss. To be put into two gallons of warm water in a narrow wooden bucket and the feet and legs to be immersed in it for half an hour just before going to bed. (19—10—19.)

Numerous old prescriptions are scattered throughout the book which I would like to quote, but I must be content with just two more which are very quaint. The first may be a liqueur or a writing-ink, according to taste :

Put two bottles of white wine, 4 oz. of gall of the Levant, 4 oz. of Black Vitriol and 2 oz. of Logwood into an earthen pipkin, unvarnished, and make it boil for 20 minutes. Pass the whole through a cloth into another similar pipkin, when it is dissolved put in two more bottles of white wine, 4 oz. of treacle, ½ oz. sulphate of Copper, 2 lbs. of Gum Arabic, add to it two bottles of Spirits of Wine, make the whole boil for ten minutes stirring it with a wooden spoon, after one or two days you may use it.

OINTMENT FOR ERUPTION OF THE SKIN.—Take a large handful of water cresses in the rough state, the same of House Leeks, the same of Pennywort Leaf pounded well in a mortar. Half pound of Fresh Butter not washed from the Dairy. Add all these into an earthen pipkin, simmer it over the fire until it becomes a juice, squeeze it through a coarse cloth, then add to it half pint of Cream, 1 ounce of white Rosin, pounded very fine, and when boiling stir the Rosin into it, put it in a Bason until the next day, then take the Ointment off the top and clarify it the same way as you would clarify Butter.

I think it would puzzle even the pharmacist of that day to render the above in extended Latin.

Three pill excipients used in 1818 are no longer employed : (1) Farina tritici with aq. rosæ; (2) mic. panis; and (3) conf. aurant. Would orange marmalade be a permissible substitute for the last named? Pil. rhei co. was made in 1830 according to Pharmacopeia Edinburgensis, which may have been due to the contiguity of the Mansfield family, who divided their year between Scone Palace and Caen Wood, now occupied by the Grand Duke Michael. The following names are not now found in our prescriptions, though some of the articles represented are still with us under other titles :

Guttae Lancaster nig. (Sir Wm. Adams' Prescription, who was he?), Emp. Thuris Comp, Rubig. Ferri and Limat Ferri, Conserv. Cynobat., Infus. Diosme., Ext. Cicutae, Ext. Cathartic, Aq. Lytharg Acet, Calx Antim. Illot., Sal. Polychrest., Magnes Vitriolat., and Syr Balsam (prescribed in 1820 for Thos. Coutts, Esq., the father of the Baroness Burdett-Coutts).

So may end these jottings from an old book. The man who wrote it is dead and gone, but here his work still lives, and, mayhap, there is much more of the same kind in other pharmacies throughout the country. Could something not be made of them? I showed this old book in our pharmacy window for a week or two and it appeared to attract attention, as well as a suggestion that I should write these remarks about it.

REVIEWS.

Nachweis und Bestimmung von Giften auf biologischen Wege. Von HERMANN FÜHNER, Ph.D., M.D. 10 in. by 6½ in. Pp. 176. 7.5m. paper covers, 9m. bound. (Vienna : Urban & Schwarzenberg, 1 Maximilianstrasse.)

THIS is, we believe, the first book devoted to biological methods of detecting poisons. Dr. Fühner, the author, is a well-known pharmacologist at Freiburg University, and he states that the book is especially intended for chemists and doctors for use in connection with forensic work, and for pharmacologists to indicate a field in which there exists much scope for original work. The book contains eighty-nine illustrations, showing the apparatus employed and the methods of utilising animals for the tests. The testing and valuation are dealt with of strychnine, picROTOXINE, cicutoxine, nicotine, colchicin, guanidin, veratrine, morphine, curare, conine, digitalis, aconitine, muscarin, caffeine, and adrenalin. Various animals and insects are employed for the tests, and an indication given that worms, yeast, and seaweeds may be used for some purposes. Physiological knowledge has not been taken for granted.

Systematic Indexing. By J. KAISER, Librarian of the Tariff Commission. *The Card System Series*, Vol. II. 9½ in. by 6 in. 12s. 6d. net. (London : Sir Isaac Pitman & Sons, Ltd., 1 Amen Corner, E.C.)

WE published a review of Vol. I. of Mr. Kaiser's book about three years ago, that volume dealing particularly with the card system at the office. The present book describes a system of collecting and indexing information such as would be required in intelligence departments of large institutions. The author is rather severe on the indexes of current periodicals, which, he says, leave the contents almost entirely untouched and concern themselves with the titles, authors, and catchwords of books. Mr. Kaiser has thus accurately described the characters which should not be possessed by an index worthy of the name. His experience seems to have been somewhat unfortunate in this respect, although it must be acknowledged that many indexes are comparatively worthless because they have not been compiled by persons who understand indexing. Our experience is that when once the indexer's system is understood it is by no means difficult to find one's way about. We refer particularly to the technical literature which comes within our purview. The book before us describes in a fascinating manner the way to collect information on the card system, the illustrative methods being those employed by the Tariff Commission. It is obvious

that the method can only be adopted in a complete form by permanent institutions and public bodies, as with individuals such a system would occupy the greater part of the working-hours, and the end in view would be defeated. The contents of the book are classified as follows: (1) Introduction, (2) Intelligence department, (3) Literature, (4) Classification, (5) Systematic indexing, (6) Application to the card-index, (7) Application to the book-index, (8) Conclusion, (9) Terminology, (10) Index. There are a number of excellent illustrations of card-indexes, and the whole matter is treated with a wealth of detail which will ensure it being the standard text-book on the subject. The paragraphs, and not the pages, are numbered.

Arbeiten aus dem Pharmazeutischen Institut der Universität Berlin. Achter Band. [Investigations conducted in the Pharmaceutical Institute of the University of Berlin. Vol. viii.] Edited by Dr. H. THOMS, Professor and Director of the Institute. Pp. viii + 280. (Berlin and Vienna: Urban & Schwarzenberg, 1911.)

THE volume bearing the above title presents a comprehensive survey of the work accomplished in the Berlin Pharmaceutical Institute during 1910, and is similar in its plan and scope to the preceding volumes which have successively been brought to notice. The contents are arranged under the following sections:

I. Investigations from the department for the examination of medicinal remedies, specialities, and secret preparations (pp. 1-67).

II. Inorganic chemical investigations (pp. 71-90).

III. Organic chemical investigations (pp. 93-215).

IV. Investigations from the department for the examination of foodstuffs, technical, and colonial products (pp. 219-254).

V. Lectures and judicial reports (pp. 257-275).

With an index.

Some of the more important features of the activity of the Institute during the period covered by the report are outlined by Professor Thoms in the introduction to the

volume. It is seen from this that the number of students attending the lectures on pharmaceutical chemistry during the summer semester and winter semester were 116 and 92 respectively, while those engaged in practical work during the same periods numbered 130 and 115, and the course in toxicological chemistry was attended by 46 students. In the department for the examination of foodstuffs the control of alimentary substances for the district of Steglitz was exercised as heretofore, and in addition thereto many products from the German colonies were examined for their scientific and economic value. These included caoutchouc and gutta-percha, as well as various drugs, essential oils, and varieties of camphor, and it has been shown that the latter article may now be produced successfully in German East Africa. Attention is also directed to the importance of the experiments conducted in the garden of the Institute for the cultivation of Japanese mint, *Mentha canadensis*, var. *piperascens*, Briq., the results of which have already been described in this journal. The participation of the Pharmaceutical Institute in the celebration of the centenary of the University of Berlin is noted, and reference has already been made to the elegant volume issued on that occasion by the Director of the Institute, in which not only a richly illustrated description of the present equipment of the Institute was given, but also an historical account of the development of pharmaceutical instruction in the German capital. Although several of the scientific or technical papers contained in the present volume have appeared in current literature, their inclusion affords a more complete representation of the work performed. On the other hand, the variety of its contents cannot fail to afford much of interest to those concerned in the development of the higher aims of pharmacy. In concluding this brief notice of the volume under consideration, it only remains to express the hope that the activities of the Institute, which hitherto have been so ably sustained, may long be continued, and meet with a due measure of encouragement and reward.—F. B. Power.



THE OPIUM CONGRESS.

Members of the International Congress on the Sale of Opium and other Toxic Drugs in Session at the Hague.

Mail-order Business.

By F. A. Degen.

How shall I start a Mail-order Business on a small capital and gradually build up a good trade? This question arises not uncommonly, and hints about the business are given herein.

THIS field has been comparatively but little cultivated by the man of restricted means, yet it offers tempting possibilities. Those desiring to embark on the mail-order business must realise that certain rules apply to this branch of the business as well as to others. For instance, the would-be advertiser must first ask himself the following questions: Have I an article of tested value? Have I a name for it that will stick in the memory and roll off the tongue without coaxing? Have I the time and the facilities for answering correspondence promptly? Have I a good list and appropriate stationery? Have I the courage to persist in the face of what at first may seem failure? Then, most important of all, have I the right kind of follow-up letters, booklets, folders, and so on?

In conducting a business by post the advertising literature must act as the salesman's deputy. There are many who would not hesitate to give a liberal salary and expenses to a flesh-and-blood salesman who refuse to pay any appreciable sum to the creator of the salesman that is sent out by post. This attitude is illogical and causes most failures. Mail-order publicity is the most difficult kind of advertising. Here the advertiser must get direct results from written matter alone. No personal influence can be brought to bear except that which is possible to embody in the written word. It is not easy to produce such a strong impression upon your reader that he will send the amount named immediately. Therefore to obtain this result requires very special knowledge and experience, and these have to be paid for. Unless your goods have particular merits it will not pay you to push them by post; but if they possess these, they must be treated in a special way. This is what is known as character in advertising, and publicity lacking character is valueless.

That letters to prospects must be typewritten, that they must look neat and attractive, goes without saying. In these days when duplicating work is done so inexpensively there is no excuse for untidy, ill-written letters. As for the matter, this must be terse, explicit, and lead up to the enclosures, which must contain copy that emphasises the points made in the letters. Do not stuff too many enclosures in one envelope; it is not the quantity but the quality of the advertising literature that counts. In a general way the enclosures have several purposes: to give the prospect a complete and detailed description of the remedy or whatever the article may be, to give proof of its efficacy, and to make it easy for the prospect to buy it immediately. For the first purpose the booklet or folder is invaluable. It should contain full explanations and, when possible, illustrations. No effort should be spared to make it as attractive as possible. Free samples might succeed a letter containing the booklet. These should have some explanatory matter wrapped round them, as the prospective customer may have overlooked or even have failed to be convinced by the first letter. Samples help to inspire confidence, for they show that you believe in the goods you are recommending, besides the samples furnish a free chance of testing the merits of your article. Testimonials are also useful for this purpose and may supplement or even replace samples. Long tedious letters should never be published in their entirety. Phrases from these emphasising points you wish to drive in are sufficient. There is an art in knowing what testimonials to make use of and how to present them attractively. Recently a firm sent theirs in a small portfolio, each testimonial on a separate sheet. This made an effective bit of publicity. An order-form also helps to clinch the sale; this might be sent in the third or fourth communication. The less the prospective customer has to do the better. People are notoriously lazy about writing.

Advertising of the mail-order variety has been used so much for fraudulent purposes that advertisers must be

careful to prepare advertisement matter in a manner that will inspire confidence. All exaggeration, all superlatives must be carefully avoided. Better under-state than claim too much. Even true statements must be pruned for this kind of publicity. For example, even if you know that your remedy cures a long list of maladies, it is better not to mention these in one advertisement or even in one letter. Do not give a chance of it being said that Blank's pills are a regular cure-all.

Some advertisers are unreasonable: they expect every letter to bring results. Does a salesman always pull off a sale the first time he calls? Many inquiries fail to materialise for various reasons. The inquirers may be mere curiosity-seekers or they may not yet be sufficiently convinced, or in the meantime their suffering may have been relieved; but keep writing, for they may become ill again and be glad to be reminded of your remedy. The number of communications to be sent to each inquirer varies. No one can make a rule for this, but once you get a letter that contains detailed information from the sender, that letter should be diligently followed at intervals for at least six months or a year.

The small advertiser should not begin with too large a list; this makes his campaign too costly. Better a gradual expansion. It is wiser to address a limited number and concentrate your attention on them than to try to reach too many. The list is an important item; a good one may be acquired in various ways. Some buy them; others make them up from their own books or the directories; while some advertise in the local Press and increase their list in this way. Where capital warrants the outlay, the last course is advisable. Some advertisers find ladies' papers and some magazines useful for this purpose. No general rule will hold good in this matter, as much depends upon the class to whom the appeal is made. Before beginning the campaign every move for at least six months ahead must be planned. Naturally the scheme may be modified to suit developments, but it is better to keep as near as possible to the original and well-considered course of action. This correspondence must be conducted methodically, therefore a filing system is required. At first inexpensive, old-fashioned files will answer, then as returns come in up-to-date vertical files prove a good investment, as these save time by simplifying the work. Business is apt to be slow at the beginning, but with courage and the right advertising literature and letters results will be satisfactory before long. Remember this, like any other venture, is an investment, and the initial expenses once defrayed, the outlook becomes more encouraging.

To conduct a mail-order business properly the cost of the articles should be about one-third of the selling-price, one-third being allowed for advertising and the other for profit. This is for a small business, but when it grows and more articles are offered the profit will be larger, as one batch of advertising will answer for all, and thus there is a saving in stamps. Advertisers are warned not to push too many articles at one time, as the effect on the people is too confusing. When quoting prices it is advisable to include cost of postage, thus saving misunderstandings. Another point: all correspondence should be sent in plain envelopes, as some people, especially invalids, are apt to be sensitive regarding their ailments, and if they are writing about medicines they do not wish others to know it.

The increasing use of the telephone for shopping is worth the consideration of the man in the mail-order business, for he may secure orders over the telephone by offering when writing special inducements to those who have telephones. Postal facilities are also increasing. Therefore there is every reason for assuming that the mail-order business will be more profitable in the future than it has been in the past.

Courage and the right kind of advertising will win in the end.

DURING 1910 the exports from Formosa amounted to 6,451,200 lb., absorbed as follows: U.S.A., 2,942,800 lb.; Germany, 1,808,000 lb.; France, 908,667 lb.; U.K., 542,400 lb.; and India, 249,333 lb. The output during 1910 was below the estimate, the quantity authorised (7,706,000 lb.) not being reached.

Merchants of Mincing Lane.

OF the many auctions of produce held in the London Commercial Sale Rooms, Mincing Lane, those of chief interest to the wholesale druggists are the auctions of crude drugs, held every alternate Thursday. Thirteen years have now elapsed since the removal of the venue from the Corn Exchange Tavern, and the change was decidedly for the better, the room (No. 10) being a nice light room at the top of the Sale Rooms building. At 10.30 A.M. wholesale druggists, drug-merchants, and brokers assemble, and after a few minutes' grace the first selling broker mounts the rostrum and proceeds to go through his catalogue, each broker offering the goods of his firm. The

be added that a large proportion of the goods offered is always bought in, and occasionally little attempt is made to sell them publicly. In fact, we should say that quite a substantial portion of the offerings is sold privately in the "Room," after the various brokers have left the rostrum, and between the auctions many of the other lots which have been catalogued change hands. This is palpable from the statistics showing the monthly deliveries from the warehouses. There are a few goods, however, which importers always offer at auction in preference to disposing of privately; these include Tinnevely senna, grey Jamaica and native sarsaparilla, and cardamoms. A few only of the drugs excite keen bidding, an exception being made in favour of cardamoms, senna, and fine asafetida. The bulk of these drugs is bought by export houses, who, as a rule, follow these markets more keenly

than home buyers. In fact wholesale druggists buy very sparingly at the auction, and the bulk of their supplies is bought privately. In addition to the drugs, there are also auctions of cinchona, vanilla, shellac, isinglass, gums, spices, etc. Quite a number of the merchants and brokers figuring in the photograph have a recollection of the period when the drug auctions were held at Garraway's coffee house in Cornhill. London is practically the only centre in the world where a drug auction is held regularly, and although in recent years competition with Continental ports has become keener, the lead is well maintained. Taken all round, the drug-auction is a dull and prosy affair, and affords a lively contrast to the energetic brass-throated gentlemen who get their living by buying and selling tea in the room



AUCTIONING THE DRUGS.

scene depicted in the photograph shows Messrs. Lewis & Peat selling, the concentrated attention of the buyers being a noticeable feature of the picture. The attendance on this occasion was somewhat sparse, owing to the holidays, and on this account the wholesale druggists who sit together on the right and left of the rostrum were few in number. The export druggists and agents sit at the forms facing the auctioneer, and the back row shows the American contingent in full strength, their attention being riveted on the catalogues—probably senna is being sold, and the prospect of a low-priced lot or a bargain accordingly whets the appetite. The proceedings are accompanied with more despatch than in previous years, and there is a general tendency to curtail the duration of the auction. Formerly, it was rarely a drug-sale was concluded before 2 P.M. in the Corn Exchange Tavern, and occasionally they lasted till 3.30 or 4 P.M., but in these days of "speeding-up" they are usually concluded by 1 P.M. or shortly after. This is because goods left unsold from one auction cannot be offered until a month afterwards, except they are put up without reserve. The auction proceedings are easy to follow, and without giving full details of the routine, which has been described in THE CHEMIST AND DRUGGIST, we may say each lot is knocked down to the highest bidder or "bought in," the buying-in price being, as a rule, several pence or shillings higher than what the broker would accept. Occasionally an article is sold "subject," which means that the broker accepts the offer subject to the owner's approval. It may

close at hand. We append a list of the names of the occupants of the room so far as we are able to recognise them from the photograph, and append a key-block for identification: 1, Fisher (Hale & Son); 2, Buchler; 3, E. A. Webb (Evans Lescher); 5, F. Howe; 6, A. A. Grant; 7, W. C. Radermacher; 8, E. de Quincey; 9, Meinertzhagen; 10, Samuel Lambert; 11, S. Johnson (T.



Merry & Son); 12, Horner; 14, F. Graf's representative; 15, Gerald Gerhardt; 16, Oldendorff (A. Faber & Co.); 17, H. W. Garraway (A. Faber & Co.); 18, W. S. Phillips (Jenkin & Phillips); 19, Otto Ziegele; 20, C. F. Gerhardt; 21, A. Marno (A. & F. Fischer); 22, C. Freundtheil; 24, Barton; 25, J. Laing; 26, von Berg; 27, O. Bruckmann's representative; 28, H. Hymans; 29, Astor Boisselier; 30, W. H. Thorpe; 31, Arthur Wheeler; 32, Henry Wheeler.

TRADE REPORT.

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities. Retail buyers cannot, therefore, for these and other reasons, expect to purchase at the prices quoted here.

42 Cannon Street, London, E.C., January 24.

THIS report deals with the drug and chemical markets up to Wednesday evening only, and any further alterations which may occur will be given in our Coloured Supplement. So far the week under review has been exceptionally quiet, the bulk of the price-variations being few and slight. Business in heavy chemicals is satisfactory, the chief demand being for delivery on contract account. Ammonia sulphate is firm, and well sold for early delivery. Benzols are quieter, but about steady, and copper sulphate is from 5s. to 7s. 6d. cheaper, the metal being unsettled. In fine chemicals the chief alteration has been an advance, varying from $\frac{1}{2}$ d. to $1\frac{1}{2}$ d. per lb., in the salicylates. Santonin has been advanced a further 4s. 6d. to 4s. 9d. per lb. Refined camphor is steady and in rather more inquiry. Quinine is also in fair consumptive demand with sales of Java in quantity. Acetyl-salicylic acid is firm, and may advance. Morphine is fairly steady. Quicksilver is firmer in second-hands. Among drugs there are few changes. Opium is nominally firm, but market is stagnant. Castor oil is steady, and cascara sagrada is in more inquiry. Cinchona was unchanged at the London auction. Ergot is easier. Florentine orris is again tending higher in conjunction with other Italian produce. Buchu has been in demand privately. In essential oils, bergamot oil has had a sharp advance, and quotations have in several instances been withdrawn. Lemon oil is decidedly firmer all round, orange oil is unaltered, and star-anise oil is easier on spot. Turpentine is lower. The chief alterations are indicated below:

Higher	Firmer	Easier	Lower
Bergamot oil	Lemon-oil	Anise oil	Copper
Linseed oil	Orris (Flor.)	(star)	sulphate
Salicylates	Quicksilver	Ergot	Cream of
Santonin	(sec. hands)	Rosin	tartar
Squill			Turpentine

Cablegrams.

AMSTERDAM.—January 18.—At the auction of cinchona held here to-day 12,109 packages were offered, of which 11,346 packages sold at the average unit of 3.07 cents per half-kilo, against 3.10c. at the auction in December. The approximate purchases of quinine were as follows: (1) The English and American factories, 10,950 kilos.; (2) the Brunswick factory, 8,334 kilos.; (3) the Mannheim factory, 9,503 kilos.; (4) the Amsterdam factory, 4,351 kilos.; (5) the Frankfort and Stuttgart factories, 6,311 kilos.; (6) the Maarssen factory, 5,692 kilos.; (7) various buyers, 15,014 kilos. The prices paid for manufacturing bark ranged from 4 $\frac{1}{2}$ c. to 35c., and for druggist's bark from 6c. to 51 $\frac{1}{2}$ c. [Since the above auction, particulars of which were received too late for last week's issue, a further 2,843 kilos. quinine in the bark have been sold.] Of the coca leaves, 62,915 kilos. offered and 50,445 kilos. sold at from 5 $\frac{1}{2}$ c. to 74c. per half-kilo.

London Markets.

ACETYL-SALICYLIC ACID is very firm, and an advance in price is talked of. The quotation for ton lots is 2s. 3d. and 5 cwt. lots 2s. 4d. per lb.

ANISE OIL (STAR).—Quiet, with retail sales of Red Ship brand at 6s. spot, but at the close there are sellers at 5s. 10d., and for January-February shipment 5s. 6d. c.i.f. is quoted.

BERGAMOT OIL has sharply advanced in primary centres, and agents in several instances are without quotations owing to the precarious condition of the new crop; from 25s. 6d. to 27s. per lb. c.i.f. is quoted by others; spot holders have also advanced their prices in sympathy, and 25s. is said to have been refused for finest, 25s. 6d. being wanted.

BUCHU.—The exports from the Union of South Africa during November amounted to 5,563 lb., valued at 510l., against 7,451 lb., valued at 549l. in 1910. For the eleven months ending November the exports were 204,369 lb. (28,681l.), against 266,598 lb. (23,865l.) during 1910. Seven packages have arrived this week from Cape Town. Round and oval leaves have been in fair demand.

CAMPHOR (REFINED) is about steady, the sales including Japanese 2 $\frac{1}{2}$ -lb. slabs for February-March shipment at 1s. 6 $\frac{1}{2}$ d. per lb. c.i.f. Continent, and on the spot 1s. 6 $\frac{1}{2}$ d. is quoted; $\frac{1}{4}$ -oz. tablets offer at 1s. 8 $\frac{3}{4}$ d.

CASCARA SAGRADA is steady, old bark offering at 42s. 6d. per cwt. on the spot, and for shipment 38s. c.i.f. is quoted.

CASTOR OIL.—Finest medicinal water-white Italian is quoted 39s. per cwt. c.i.f. in tins and cases. Hull make of first pressing is quoted 28l. 5s. for prompt delivery in barrels, delivered free on wharf London. In Liverpool 3 $\frac{3}{4}$ d. to 3 $\frac{5}{8}$ d. per lb. is quoted for good seconds Calcutta and 3 $\frac{1}{2}$ d. for first pressing Belgian.

CHIRETTA.—Demand is quite retail, and up to 9d. has been paid for single bales.

CINCHONA.—At auction on Tuesday 760 packages were offered, of which about 480 sold at previous sales' rates, the average unit being $\frac{1}{2}$ d. per lb.; of Java 400 bales offered, and 260 sold, including Ledgeriana stem and branch at 3d. to 4 $\frac{1}{2}$ d., branch at 1 $\frac{1}{2}$ d. to 2 $\frac{1}{2}$ d., and root at 2 $\frac{3}{4}$ d. to 4 $\frac{1}{2}$ d.; of East Indian 77 bales offered and 60 sold, at 3 $\frac{3}{4}$ d. for Crown stem chips, 2 $\frac{3}{4}$ d. for quilly chips, 3d. for broken quill, 2 $\frac{3}{4}$ d. to 3 $\frac{1}{2}$ d. for spoke shavings, and 1 $\frac{1}{2}$ d. for branch; succirubra natural stem chips 1 $\frac{1}{2}$ d.; of West African bark 241 bales offered and 157 sold, at from 2 $\frac{1}{2}$ d. to 2 $\frac{3}{4}$ d. for broken red quill; 42 bags Ceylon were bought in.

CITRIC ACID is practically unaltered at from 1s. 4d. for foreign and 1s. 4 $\frac{1}{2}$ d. for English.

COD-LIVER OIL.—In anticipation of the new fishing, buyers are holding off waiting developments. Meanwhile, one agent is offering new Lofoten oil for February-March shipment at 104s. per barrel c.i.f. terms.

COPPER SULPHATE is about 5s. to 7s. 6d. per ton lower all round as the result of the unsettled position in copper. Ordinary Liverpool brands for prompt delivery are quoted 22l. 10s., February-April 22l. 15s., and May-June 22l. 5s.

CORIANDER-SEED.—Very high prices are quoted for English—viz., 32s. to 35s. per cwt.

CREAM OF TARTAR has declined about 2s. per cwt.: 98 per cent. powder offering at 82s. 6d. and 95 per cent. 80s. per cwt.

HONEY of the cheaper grades suitable for manufacturing purposes is very scarce and wanted, but buyers hesitate to pay the high prices asked.

LEMON OIL is decidedly firmer, shippers offering by wire at from 5s. 5d. to 5s. 6d. c.i.f. for prompt shipment of new crop; spot is quoted 5s. 6d. up to 5s. 9d. and 6s. for finest; primary markets have been more active.

MENTHOL.—In our Coloured Supplement we report the auction result of four parcels amounting to 16 cases, offered "without reserve." Privately second-hand sellers quote Suzuki for January-February shipment at 20s. 3d. c.i.f.; oil for January-February shipment is quoted 6s. 9d., and March-April 6s. 6d. c.i.f. Retail sales of Suzuki are reported at 24s. spot, and Kobayashi at 24s. 9d. More inquiry is reported this week, but the immediate future

of the spot market depends on the auction sales to-morrow (Thursday).

MORPHINE is fairly steady, the makers still quoting 14s. for the hydrochloride, but possibly 13s. 9d. would be accepted.

OPIMUM.—Prices remain nominally firm, but there is no actual business to support them in primary markets; small sales are reported from Constantinople at, it is said, 29s., but kind not stated.

A Smyrna correspondent writes on January 12 reporting another quiet week; sellers, however, firmly maintain their position. Several cases Karahissar changed hands at 30s. 6d. for 1911 crop, two of which were for interior speculators. Consumers have not yet shown any disposition to buy this year, and both London and New York expect lower figures on primary markets. This, however, will not take place, as we have already stated, until the winter is over, and the sowings have been carried out under favourable conditions. Stocks are much reduced and in fairly strong hands; therefore it is obvious that the major part of this will fetch extreme high figures before new crop is available. The arrivals in Smyrna to date amount to 1,075 cases, against 4,270 at the corresponding period last year.

ORANGE OIL is unaltered, both *sweet* and *bitter* being offered at 7s. 9d. per lb. c.i.f.

ORRIS is still tending higher, the value of good Florentine selected being 50s. to 52s. 6d., good sorts 45s. to 47s. 6d., and middling at 40s. to 42s. 6d. per cwt. Mogador continues scarce, the value to arrive being about 37s. 6d. c.i.f.

QUICKSILVER.—The harder tone in second-hands noted last week has materialised to the extent of 1s., the lowest quotation being 7l. 18s. 6d. First-hand is unchanged at 8l.

QUININE.—At the Amsterdam quinine auction held on January 19, 1,417½ kilos. (50,000 oz.) Ed. II. were sold at an average price of fl. 11.04½ per kilo., against fl. 10.99½ per kilo. at the previous auction. The next auction will be held on February 2, when a similar quantity will be offered. There is a fair consumptive demand at unchanged rates, Java selling in small lots at 6½d. (a line of 50,000 oz. is said to have been done at 6½d.). Amsterdam is quoted 7d. and German 7½d. from second-hands.

SAFFRON.—Supplementing last week's quotation, another importer asks 38s. 6d. per lb. net for finest Valencia quality.

SALICYLATES.—The makers announced an advance on Monday varying from ½d. to 1½d. per lb., the following being the scale of prices for a well-known make:

	Small lots per lb.	2 cwt. over six months.	10 cwt. over six months.	1 ton over six months.
Acid, salicylic powder				
or levigated ...	1s. 3d.	1s. 2d.	1s. 1½d.	1s. 1d.
do. crystals ...	1s. 5d.	1s. 4d.	1s. 3½d.	1s. 3d.
do. physio. pure ...	3s. 5d.	3s. 1d.	2s. 9d.	2s. 5d.
Salicylate of soda,				
powder ...	1s. 6d.	1s. 5d.	1s. 4½d.	1s. 4d.
do. crystals ...	1s. 8d.	1s. 7d.	1s. 6½d.	1s. 6d.
do. physio. pure	2s. 11d.	2s. 7d.	2s. 3d.	1s. 11d.

The above prices are net cash *ex* warehouse London and on assorted contracts, the falling clause is allowed on the undelivered portions so long as the lower price remains in force.

SANTONIN.—The Convention last Friday announced a further advance of from 4s. 6d. to 4s. 9d. per lb., the following being the official rates: 1 lb. lots, 71s.; 28 lb., 69s. 3d.; 56 lb., 68s.; 1 cwt. 66s. 3d., and 2 cwt. lots in one delivery 64s. 6d. per lb. net cash.

SENEGA has been selling rather better recently, spot holders asking 2s. 8d. per lb. net.

SHELLAC is steady, with small sales on the basis of 63s. to 64s. for standard TN orange.

SPICES.—At auction 255 bales Zanzibar *Cloves* offered, and 205 sold without reserve at from 4½d. to 4¾d.; of 38 bags Seychelles offered 18 sold at 4¾d. to 5½d. for small to fair, and 4½d. to 5d. for dark; 25 bales Seychelles *stems* sold at 2½d. Privately small sales of Zanzibar have been made at 5½d. spot, and January-March shipment at 4½d. (with 4¾d. asked), and March-May 5d. c.i.f. Of *Chillies* 268 bags Mombasa were bought in at 45s., and 224 bags

fine red Japanese sold without reserve at 35s. to 35s. 6d., and 19 bags fine red Nyasaland at 43s.; of 170 bags *Capsicums* offered a few sold at 44s. to 44s. 6d. for fine large red Nyasaland and 35s. for good medium. 250 bales Ceylon *Cinnamon* chips were bought in at 2½d., and 6 bales superior firsts sold without reserve at 1s. 7d. *Ginger* was quiet; 148 bags Japanese sold without reserve at 32s. to 32s. 6d.; 828 bags good washed rough Cochin were bought in at 47s. to 48s.; 38 bags Calicut were also bought in at 85s. for slightly wormy and mouldy, and 72s. 6d. for good small cut. *Pepper* is firm, the sales including Singapore for April-June shipment at 5½d. c.i.f.; small spot sales of fair Singapore have been made at 5½d. spot; in auction 100 bags fine Tellicherry were bought in at 5½d.; of *White* pepper at auction 34 bags fine Singapore sold at 8¾d., and 94 bags good Saigon were bought in at 8¾d.; privately the spot price of fair Singapore is 8d. per lb.

SQUILL.—Prices in Sicily have advanced about 5s. per cwt. recently. Good white are quoted 28s., medium white 21s., and dark brown 15s. per cwt.

TARTARIC ACID is quiet and unaltered, foreign offering at 1s. 0½d. and English at 1s. 0½d.

TURPENTINE has declined about 1s. per cwt., American closing at 35s. to 35s. 1½d., and February-April 35s. 3d. per cwt.

French Lavender Oil.

From the commercial side the comments on the French lavender-oil situation in a recent report of Messrs. Roure-Bertrand Fils are very interesting. The crisis in this oil, which is regarded as somewhat acute, is stated to be due to two causes. The first is of an economic nature. The conditions of life and of labour in the mountains have changed enormously in the past ten years, and every difficulty is now in the way of a profitable harvest. The second cause lies in the manner in which the oil is now dealt with by the distillers and the small speculators. The remedy is difficult to find, but it is emphatically stated that any remedy ought to have in view the fact that the oil ought to sell at not more than fr.20 per kilo., whereas some enthusiasts want to maintain it at fr.30, and, as Messrs. Roure-Bertrand say, "Oil of lavender ought not to be worth this price." The high prices are driving consumers away from the oil, and it will be very difficult to bring them back to the consumption of a product which they find they can to some extent do without. The crop reports and abstracts of essential-oil literature conclude this interesting and useful report, which is conspicuous by its unbiassed nature, and is quite free from any attempt to advertise the house which publishes it.

Manchester Chemical Market.

January 23.

A review of the past month has disclosed a rather quiet feeling throughout. Although export demand for heavy chemicals has been a fair average on home account, the cotton lock-out in Lancashire has militated to a great extent against an average demand in this department. Soda-crystals have been depressed, owing to contentions among makers which have brought prices to a comparatively low level; for quantity buyers could not get in below, say, 40s. or 42s. 6d. per ton on contract account. Caustic soda remains generally unchanged. In truck-loads, 70 per cent. is quoted 9l. 12s. 6d. to 9l. 15s., in 5-ton truck lots, delivered Lancashire and Yorkshire, net. Ammonia alkali and soda-ash have not shown much change. Caustic potash is unaltered; 75 to 80 per cent., solid, 19l. 10s. to 19l. 15s., ex store, Manchester. Electrolytic liquid, 50 Bè, 11l. 5s. c.i.f. Goole; and 88 to 90 per cent., solid, 22l. to 22l. 10s. f.o.r. Goole-Hull, all net cash. Carbonate of potash steady; German, 90 to 92 per cent., 16l. 15s. to 17l. 5s. c.i.f. U.K. ports; Russian, 90 to 92 per cent., 15l. 10s. at Hull, 15l. 17s. 6d. at Liverpool, and 16l. 5s. f.o.r. Manchester, ready on spot, all net cash. Glycerin is declining, and 1260 s.g. white distilled is offered around 75s., less 2½ per cent., with other grades proportionate; crude is dull, with 80-per-cent. English obtainable at 47l. to 48l., and buyers interested around 44l. to 45l. Marseilles is selling at the latter figure. Special quotations are made for B.P. quality. Sulphate of copper has had a declining tendency, and closes lower on the month at 22l. 17s. 6d. to 23l. 2s. 6d. per ton for best brands, delivered Manchester. White powdered arsenic has been fairly steady at 11l. 5s. to 11l. 7s. 6d. per ton, delivered here. Despite the extremely high level of quotations for farina, the demand is good and prices are rising steadily. It is tolerably certain that there will not be sufficient supplies to go round, and frantic efforts are being made by consumers who are not covered to use substitutes,

without success. Further rises are anticipated, but ordinary quotations are: Superior German spot, 17s. to 17s. 6d., February-May, 17s. 6d. to 18s., ex store, Manchester; superior Dutch, 15s. to 15s. 6d. f.o.r. Goole; seconds, 12s. 6d. f.o.r. Goole, all net cash. In other respects brown acetate of lime, owing to scarcity, has had a big advance. There is practically no American offering, and English is at 7l. 12s. 6d. to 7l. 15s. per ton for brown, and 11l. 10s. to 11l. 12s. 6d. for grey. Greases are in good demand; brown bone, 26s. 6d. to 27s.; white bone, 28s. to 28s. 6d.; marrowfat, 29s. to 29s. 6d.; brown skin, 27s. to 27s. 6d.; white skin not offering—all at makers' works or landing-port, less 2½ per cent. American cottonseed-soap quoted as follows: No. 1 pale, 65 to 68 per cent., March-June shipment, 13s. to 13s. 6d. c.i.f. U.K. ports, and on spot, 14s. to 14s. 6d. f.o.r. Manchester-Liverpool, net cash. Paraffin wax is advancing, and most of the makers decline to quote except for immediate delivery. American scale is also difficult to buy. Italian green olive-oil soap is in very short supply, and stocks have become exhausted. The prices for shipment are also firmer, in sympathy with the advance in oil, and 56 to 58 per cent. is now quoted in bars at about 22s. to 22s. 6d. c.i.f. Liverpool, or equal, net cash. Sulphate of ammonia is higher, at 14l. 7s. 3d. to 14l. 10s. 9d. per ton, f.o.r. Manchester.

Heavy Chemicals.

The trade in the heavy-chemical market is for the most part of a satisfactory character, and there is now an increased demand both for main and miscellaneous products. A big bulk of the demand is, of course, on contract account, and this department is brisk both for home trade and export. Values do not fluctuate greatly, but they are all round maintained and on the firm side, owing to high costs of manufacture.

SULPHATE OF AMMONIA.—This product is very steady, and early supplies are well sold. There are more inquiries on forward account, and prices are rather higher. Present nearest figures: Beekton, 25 per cent. ammonia guaranteed, 14l. 2s. 6d.; London terms, 13l. 15s.; Leith, 14l. 12s. 6d.; Liverpool, 14l. 12s. 6d.; and Hull, 14l. 8s. 9d. to 14l. 10s.

BENZOLS are rather quieter, but on the whole steady. Forward naked prices: London, 90 per cent., 11½d. to 1s.; and 50 per cent., 10½d. to 11d. North, 10½d. and 9½d. respectively.

BICHRIMATE OF POTASH AND SODA are on the quiet side at unchanged rates. Bichromate of potash, English and Scotch deliveries, 3½d. per lb., less 5 per cent.; and export, 3½d. per lb. net, f.o.b. Glasgow. Bichromate of soda, English and Scotch deliveries, 3d. per lb., less 5 per cent.; and export, 2½d. per lb. net, f.o.b. Glasgow.

LEAD PRODUCTS.—Steady, with good all-round demand. Dry white lead, 24l. and red lead, 18l. 10s. per ton, Tyne. White acetate of lead, 25l. to 25l. 10s. Brown acetate of lead, 21l. 10s. to 22l. Nitrate of lead, 26l. to 26l. 10s. per ton, less 2½ per cent.

ZINC SALTS.—Steady at unaltered figures. Zinc-sulphate crystals, 7l. to 7l. 10s.; and zinc-chloride solution, 100° Tw., 6l. 5s. to 6l. 10s. per ton.

MAGNESIUM SALTS have been in brisk request both for home and export. Sulphate, 62s. 6d. to 70s. per ton; chloride, 67s. 6d. to 70s. per ton; and carbonate, 30s. to 35s. per cwt.

Continental Drug and Chemical Markets.

COPAIBA.—The expectations of a considerable supply have not been fulfilled, while the demand has diminished the stocks on hand, the higher values being little hindrance to business. Ph.G.V. now costs m.330 to m.420 per 100 kilos.

DEXTRIN.—The position of potato-starch products shows a strongly marked upward tendency, this being due to the position of raw material, which is so scarce that dextrin is now quoted at m.44 to m.46 per 100 kilos.

GLYCERIN.—As was predicted in previous reports from Marseilles, special contracts have taken place at fr.115 and fr.117.50 in 80-per-cent. crude glycerin for delivery over the year. Considerable offers of saponification glycerin are made at fr.142.50, and contracts at fr.140 are mentioned. The market situation is still very uncertain, and very diverse prices are paid, according to the shipping port and the qualities offered. The following prices are effective for new business: Saponification glycerin (spot), fr.142.50 to fr.140; delivery over 1912 being quoted at from fr.142.50 to fr.140, with delivery over 1913 at fr.132.50. Crude glycerin (80 per cent.), spot, fr.115; delivery over 1912, fr.117.50; over 1913, fr.110 per 100 kilos, f.o.b.

KOLA.—The African crops have probably been small this year, as the trees, according to reports to hand, have borne little fruit. Offers of m.80 per 100 kilos, have been refused for prompt shipment, spot (Hamburg) having been sold at m.85 and more.

TONKA-BEANS.—The demand for this article is good, but principally for Para. It is probable that further supplies will arrive, and lower prices are expected.

SOUTH AFRICAN NEWS.

(From "C. & D." Correspondents.)

"The Chemist and Druggist" is regularly supplied by order to all the members of the seven Societies and Associations of Chemists in British South Africa, as well as to other chemists in business there.

Cape Province.

PERSONAL.—Mr. Geo. H. Taylor, representing Messrs. W. J. Bush & Co., Ltd., and other English houses, was in Cape Town when the mail left.

THE ANNUAL PICNIC of the staff of Messrs. Petersen, Ltd., Cape Town, was held at Hout Bay on January 2, when a most enjoyable time was spent.

THE GOVERNMENT LABORATORY.—Complaints are being made regarding the division of the Government's chemical work between the Department of the Interior, the Elsenburg Agricultural College, and the Pretoria Laboratory, following the removal of Dr. Juritz to Pretoria.

COLONIAL AND FOREIGN NEWS.

ANGLO-GERMAN TRADE.—The Board of Trade is in receipt of information to the effect that the Bill empowering the Bundesrat to continue to accord from January 1, 1912, to December 31, 1913, most-favoured-nation treatment to the subjects and products of the United Kingdom and the British Colonies and possessions has been enacted.

PHARMACISTS' EDUCATION IN NORWAY.—The preliminary and further education of pharmacists is being seriously considered by the Norwegian Government, which proposes to appoint a Commission to look into the matter. The creation of an independent institute is foreshadowed, though it remains to be decided whether this will be connected with the University or the Technical High School. The expediency of supplementing the training of apprentices in pharmacies by academic training, and the admissibility of the employment of assistants without regular pharmaceutical training, together with the question of the contributions to be demanded of pharmacists towards the expenses of the scheme, will further occupy the attention of the Commission.

THE OPIUM CONFERENCE AT THE HAGUE.—"The Times" reports that an opium convention was signed on Tuesday, January 23. It contains twenty-five articles in which the Powers agree to control by law or regulations the production and distribution of raw opium, in so far as it is not already regulated; to limit, according to the differences of their commercial conditions, the number of towns or ports where the import or export of opium is permitted; to prohibit or control the export of raw opium to countries in which its use is prohibited or limited. Where the import or export of raw opium is permitted, it will be carried on only by authorised persons. The Powers undertake the gradual suppression of the manufacture and use of prepared opium, and of local trade in it, in accordance with the existing legislation in the different countries. Where the trade is not yet regulated, the import and export of prepared opium shall be prohibited as soon as possible; and Powers not yet ready for immediate prohibition will take restrictive measures.

Chemists' Assistants' Association.—The unfavourable weather was responsible for a smaller attendance than usual at the musical and social evening held at 73 Newman Street, London, W., on January 18. Card games occupied most of the evening, Mr. P. B. Phillips at the piano also providing music.

Glasgow and West of Scotland Chemists' Association.—A highly successful whist-drive was held at the Regent Tea Rooms on January 18. The attendance was very satisfactory, although there was an exceptionally large number of apologies for absence. The prizes were awarded as follows: *Ladies*—(1) Mrs. Fergusson, (2) Miss A. M. Smith, (consolation) Mrs. Lamont. *Gentlemen*—(1) Mr. D. R. Mackay, (2) Mr. Stewart Wilson, (consolation) Mr. J. G. Ness. Miss McAdam presented the prizes, and Messrs. Moir and Kitchen were responsible for the admirable arrangements. Whist engaged so much of the time that there was little time left for music.

"C. & D. Diary" Competition.

THE coupon which we insert in our *Diary* every year has again brought a goodly response from our subscribers, who have found ample scope for their ingenuity in answering the following questions:

- (1) What page advertisement among the *Diary* advertisements do you like best?
- (2) Which is the most artistic advertisement in the *Diary*?
- (3) Which is the best business-producing advertisement in the *Diary*?
- (4) Name your favourite house among those advertising in the *Diary*.
- (5) Name your favourite house not advertising in the *Diary*.

On this occasion we deal with Card I, and with Home results only. We find that the

BEST-LIKED ADVERTISEMENT PAGE

is Burroughs Wellcome & Co.'s *Materia Medica* Farm (p. 145). This illustrates the gathering, loading, and milling of belladonna herb. Next in order is placed Allen & Hanburys, Ltd. (p. 165), which represents the manufacturing side at Bethnal Green, and the exportation of the finished product. Third on the list is Stevenson & Howell (p. 9), with their much-admired "Bunch of Lemons." The special page of Newball & Mason (p. 59), with the typical farmer exclaiming "Good! It's Mason's!" is accorded fourth place; and W. J. Bush & Co., Ltd., are fifth on the list with p. 469. The Semreh Self-fixing Bottle Caps (pp. 158-9) closely follow, after which are placed in order of voting S. Maw, Son & Sons, Vaseline, W. Martindale, and Ucal, Ltd. Others which have received an almost equal number of votes include the Standard Tablet and Pill Co., Ltd., Calox, John Strange Winter, the Wand Manufacturing Co., W. B. Cartwright, Ltd., J. C. Eno, Ltd., T. Beecham, Yost Typewriter Co., Ltd., Bernard Slack, Seabury & Johnson, Stafford Allen & Sons, Ltd., British Drug Houses, Ltd., Ford, Shapland & Co., Alliance Drug & Chemical Co., E. Cook & Co., Ltd., "Egglossa," C. E. Fulford, Ltd., Fletcher, Fletcher & Co., Ltd., Reynolds & Branson, Glaxo, Burgess's Lion Ointment, Vinolia, Wright, Layman & Umney, Ltd., H. Bronnley & Co., Ltd. ("Omar Khayyam"), J. H. Smith & Co. ("Doomo"). A number of competitors were disqualified on this question, as they give a series of pages instead of indicating one specific page.

THE MOST ARTISTIC ADVERTISEMENT

was adjudged to be the announcement of W. J. Bush & Co., Ltd., on p. 489, the young lady on the swing illustrating Buisson Frères' perfumes having become the favourite this year. The voting is closely followed by Burroughs Wellcome & Co.'s series of advertisements on pp. 143-149. Next follow Allen & Hanburys' announcements on pp. 161-170; Stevenson & Howell, Ltd. (pp. 8 and 9), are fourth. These we may place in the first-class voting, while in the second-class (always judging by the number of votes) are placed W. Martindale, Fletcher, Fletcher & Co., Ltd., Newball & Mason, the Standard Tablet and Pill Co., Ltd., Ford, Shapland & Co., S. Maw, Son & Sons, H. Bronnley & Co., Ltd., John Strange Winter, and Raphael Tuck & Sons, Ltd.

BEST BUSINESS-PRODUCING ADVERTISEMENT.

Subscribers have no hesitation in answering this question, the remarkable series of Allen & Hanburys' announcements on pp. 161 to 170 being voted to be the best business-producers. Burroughs Wellcome & Co. are second on the list, after which follow Daisy, Eucryl, Alliance Drug and Chemical Co., A. H. Cox & Co., Ltd., Semreh Self-fixing Bottle Caps, all these being practically accorded equal votes. Next in the scale and in order of voting follow: Ucal, C. E. Fulford, Ltd., Raphael's, Ltd., Standard Tablet Co., Thermogene, Vaseline, S. Maw, Son & Sons, Newball & Mason, and John Bull Extract. Finally other votes are given for Parke, Davis & Co., Wright, Layman & Umney, Ltd., Oppen-

heimer, Son & Co., Ltd., Evans Sons Lescher & Webb, Ltd., and James Woolley, Sons & Co., Ltd.

FAVOURITE BUSINESS HOUSE.

The choice has fallen upon Allen & Hanburys, Ltd., while Burroughs Wellcome & Co. take second place. S. Maw, Son & Sons are third, Evans Sons Lescher & Webb, Ltd., fourth, British Drug Houses, Ltd., fifth, Wright, Layman & Umney, Ltd., sixth, and Sangers seventh on the list. Others in order of merit are Parke Davis, Ucal, Raimes & Co. (York), Burgoyne, Burbidges & Co., and Martindale. Another batch of competitors give votes to Barclay & Sons, Ltd., F. Newbery & Sons, Ltd., John Bell, Hills & Lucas, Ltd., Corbyn, Stacey & Co., Ltd., Ayrton & Saunders, Ltd., Southall Bros. & Barclay, Ltd., Oldfield, Pattinson & Co., Stevenson & Howell, Ltd., Wyley & Sons, Ltd., Jas. Woolley, Sons & Co., Ltd., Goodall, Backhouse & Co., Warrick Bros., Ltd., and Potter & Clarke, Ltd.

FAVOURITE BUSINESS HOUSES NOT ADVERTISING.

Many competitors find this a most puzzling question, principally on account of the fact that their favourite business houses do advertise in the *Diary*, and several notify us of this fact. Two others are unable to think of any drug firm not advertising in the *Diary*. By far the majority look in vain for the announcements of May, Roberts & Co., Ltd. Next in order are Meggeson & Co. and Erasmic Soap, these being equal, Kodak, Ltd., and T. Kerfoot & Co. closely following. Lower down the list are Bleasdale, Ltd., Raimes, Clark & Co., and Bourne, Johnson & Latimer, and placing a few of the remainder we have: D. & W. Gibbs, Ltd., J. Richardson & Co., Ltd., May & Baker, W. T. Owbridge, Ltd., Lorimer Marshall, Ashton & Parsons, Ltd., Evans, Gadd & Co., Hough, Hoseason & Co. J. Timpson & Co., Ilford, Ltd., Houghtons, Ltd., Bovril, etc.

AWARD OF PRIZES.

It will be noticed the winning cards read thus:

- (1) Best-liked page advertisement in *Diary*: Burroughs Wellcome & Co. (p. 145).
- (2) Most artistic advertisement: W. J. Bush & Co., Ltd. (p. 469).
- (3) Best business-producing advertisement: Allen & Hanburys, Ltd.
- (4) Favourite house in *Diary*: Allen & Hanburys, Ltd.
- (5) Favourite house not in *Diary*: May, Roberts & Co., Ltd.

Two competitors have succeeded in answering the whole five questions correctly, to whom we award one guinea each. They are:

Mr. Arthur Thomson, 106 High Street, Wandsworth, London, S.W., and
Miss Hilda Nichols, 39 High Street, Sittingbourne.

Eight others have succeeded in solving four questions correctly, and to these we award 7s. 6d. each. They are:

Mr. Wm. Barringall, c/o Mr. R. F. Hughes, Methil.
Mr. Valentine Norman, 12 High Street, Godalming, Surrey.
Mrs. G. T. Hobbs, 3 Norman Road, Canterbury.
Miss Dorothy Middel, 252 Gorgie Road, Edinburgh.
Mr. G. H. Pierson, New Barnet.
Mr. W. E. Plant, 28 High Street, Doncaster.
Mr. J. Richards, 53 Knightsbridge, London, S.W.
Mr. J. W. Robinson, 7 Wordsworth Road, West Bridgford, Nottingham.

CASEIN.—One ton of casein can be obtained from about 20 tons of milk, or 7,000 gals. Casein is a constituent of cold-water paint, is used in sizing paper, and is made up as a substitute for celluloid, as well as being used in the moist condition in skin-creams. The manufacture of casein is likely to be begun in Victoria, Australia, shortly.

THE BOROUGH POLYTECHNIC INSTITUTE, 103 Borough Road, London, S.E.—The new prospectus of over 200 pages is now obtainable. The chemistry courses cover organic and inorganic chemistry (Stages I, II, and III), electro-chemistry, the chemical technology of the essential oils, the chemistry and manufacture of foodstuffs, and the analysis and valuation of laundry-trade materials. Lectures on photography are also available.

SCIENTIFIC PROGRESS.

Temperatures under this heading are on the Centigrade scale.

A New Glucoside.—At the December meeting of the Société de Pharmacie de Paris a note was presented by Mlle. Fichtenholz describing a new glucoside which she had isolated from *Kalmia latifolia*. This body, which has been named Kalmifoline, crystallises in white needles, melting at 120°, and having a specific rotation -59.6° . The sugar formed on hydrolysis is glucose.

Bergaptene.—Thoms ("Berichte," 1911, 3325) has reinvestigated the crystalline substance found in the essential oil of *Fajava xanthoxyloides*, and finds that the crude substance melting at 121° can be separated into xanthotoxin, melting at 145°, and bergaptene, melting at 190°-191°. The two bodies are isomeric, of the formula $C_{10}H_{16}O_4$. A number of crystalline derivatives have been prepared, and the identity of the two bodies is established beyond doubt.

Emodin and Rheine.—Oesterle ("Archiv. der Pharm.," 1911, 445) has previously proved that aloe emodin yields rheine on oxidation. He has now shown that rheine, identical with that contained in rhubarb-root, is obtained by the oxidation of chrysophanic acid. Emodin possesses the functions of a primary alcohol, and on reduction with nascent hydrogen this alcoholic complex is transformed in a hydrocarbon grouping, which is present in chrysophanic acid.

A New Vanilla Pest.—A report by M. Keating appears in the current issue of the "Bulletin Economique" of Madagascar on a new vanilla pest which causes considerable damage to fruit. The plantations at Nossi-Bé are the principal sufferers. The pest is a tiny insect, of the family of the *Tineites*, genus *Hyponomeute*, and settles on the pistil of the flower, upon which it lives. It does not appear until fecundation has taken place and the fruit has commenced to form. It is found that, in the early part of July, the flower becomes detached and the fruit stops developing. Steps are being taken to exterminate this new pest.

Ortol Test for Milk.—"Pharmaceutical Notes" for January contain on page 2 a note on the uses of hydrogen peroxide in the ortol-test for milk. This test consists in adding an ortol-solution pellet (containing 0.05 gram of a mixture of *o*-methyl-amino phenyl sulphate with quinol) to 5 c.c. of water. One drop of this 1-per-cent. reagent is added to a test-tube half-full of milk, the mixture shaken, and 1 drop of hydrogen-peroxide solution (5 vols.) added. Raw milk, or milk that has not been heated about 75°, gives a reddish-pink colouration. With milk which has been previously heated above that temperature no colouration is given. The object of the note is to record experiments showing that the presence of small amounts of acetamide used as a preservative for hydrogen peroxide in no way vitiates the accuracy of the test.

Xanthoxylum Oils.—Sennler and Schosberger ("Berichte," 1911, 2885) have examined the essential oils distilled from *Xanthoxylum antertia* and *X. alatum*. On fractional distillation the oil from *X. antertia* gave three fractions. That boiling at 70°-80° at 16 mm. was an aliphatic terpene not identified with any hitherto known terpene, having a specific gravity 0.825, rotation $+30^\circ$, and refractive index 1.4977. The fraction boiling at 115°-130° contains a new sesquiterpene, named evedene, and which appears to be related to limcene, the terpene isolated by Burgess from oil of limes. Eugenol methyl ether was also isolated, and a solid body melting at 85°, and having the formula $C_{10}H_{16}O_4$. The oil from *X. alatum* contained 80 per cent. of a terpene probably identical with *lavo*-sabinene. Cumic aldehyde was also found to be present.

The Adulteration of Honey.—According to Curtel ("Ann. de Chimie Analyt.," 1911, 422) factitious honey may be detected in genuine honey by either of the two following reactions: (1) This depends on the fact that pure honey contains no oxymethyl-furfural, which is present in nearly all artificial honeys. A few grams of the honey is well triturated in a mortar with a little ether, and the ether decanted into a porcelain capsule. To the evaporation residue a few drops of a 1-per-cent. solution of resorcin in strong hydrochloric acid are added carefully. With pure honey no colour, or at most a feeble yellowish-green, is obtained, whereas with factitious honey a cherry-red to violet colour is immediately obtained. (2) In the second reaction 0.5 gram of nitrate of silver is dissolved in 5 c.c. of water, 1.5 c.c. of 5-per-cent. NaOH solution is added, and the liquid filtered and the precipitate washed with water. This is then dissolved in 6 grams of 10-per-cent. ammonia solution. Five drops of this reagent are added to 5 c.c. of solution of the honey (1 in 2 of water), and the mixture heated on a water-

bath for five minutes. The liquid is well shaken and the tube examined. In the presence of most artificial honeys a mirror-like deposit of metallic silver is apparent on the tube, which is not the case with pure honey.

Essential-oil Notes.—The current issue of Messrs. Roure-Bertrand Fils' semi-annual report contains the results of an exhaustive study of the cultivated mints by MM. A. and E. G. Cannes, in which a table is given illustrating the differences between the essential oils from ordinary and from the so-called "red" peppermint. The latter oil has the following characters among which the high menthone-value is most striking:

		Crops	
		1908	1911
Sp. gr. ...	...	0.9170	0.9133
Optical rotation ...	...	$-16^\circ 38'$	$-13^\circ 44'$
Acid-value ...	...	1.0	1.2
Ester-value ...	...	18.9	17.5
Menthyl acetate ...	...	6.7%	6.2%
Combined menthol ...	...	5.2%	4.9%
Free menthol ...	...	52.8%	55.1%
Total menthol ...	...	58%	60%
Menthone ...	...	16.8%	—

The following new essential oils are described: *Nepeta Nepetella* is a plant with a peculiar peppermint-like odour, growing in the neighbourhood of St. Auban. It yields about 0.06 per cent. of a thick essential oil, with a mint-like odour, and having the following characters: Sp. gr. at 15° = 1.0398; optical rotation = $+15^\circ 12'$; acid-value, 45.5; ester-value, 245.7; saponification-value of the acetylated oil, 314.5. The oil therefore contains a very large amount of esters and some free alcohols, of which menthol appears to be one. Three samples of ylang-ylang oil distilled at Mayoth are reported upon, and are of interest, since they do not agree, either in their physical characters or in their odour, with ordinary ylang-ylang oil. Two of the three samples had the following characters:

		1	2
		0.9594	0.9651
Sp. gr. at 15° ...	...	—53°56'	—45°16'
Optical rotation ...	...	1.3	1.4
Acid-value ...	...	129.7	131.6
Ester-value ...	...	45.4%	46%
Esters as linalyl acetate ...	...	52.5%	57.8%
Total alcohols ...	...	52.5%	57.8%

The third sample had the very abnormal rotation of $-4^\circ 4'$. An oil was obtained from a parcel of leaves of unknown botanical origin, gathered on the Ivory Coast, which was of a very pleasant and powerful odour. The leaves are known locally as "Capé," and it is hoped that further supplies may be forthcoming. The oil recalls the odour of patchouli, and as evaporation proceeds the odour becomes exceedingly powerful and pleasant. It has the following characters: Sp. gr. at 15° = 0.977; optical rotation, $+39^\circ 38'$; acid-value, 0.7; ester-value, 108.5.

NEW BOOKS.

Any of these books printed in the United Kingdom can be supplied, at the published price, to "C. & D." subscribers on application (with remittance) to the Publisher, 42 Cannon Street, London, E.C. These notes do not exclude subsequent reviews.

Fourth Report of the Wellcome Tropical Research Laboratories at the Gordon Memorial College, Khartoum. Vol. 13. General Science. 11×7 $\frac{1}{2}$. Pp. 353. 18s. net. (Baillière, Tindall & Cox.) [This is the companion volume to the report which we reviewed in the *C. & D.*, December 23, index folio 923, and contains, among other articles, interesting researches on gum acacia and hashish, to which we hope to refer in a later issue.]

Merck, E. *Prüfung der Chemischen Reagenzien auf Reinheit*. 2nd edit. 9×6. Pp. 332. (Darmstadt.) [A clearly printed, concise account of the chief tests, physical and chemical, by which the purity of chemicals can be assured. The various tests are dealt with under separate paragraphs under the heading of each chemical. References to literature are freely given. It is printed in German, but in Roman characters, and is not difficult to follow, even by those whose knowledge of German is limited.]

Who's Who in Science (International), 1912. Edited by H. H. Stephenson. 9×5 $\frac{1}{2}$. Pp. 323. 6s. net. (Churchill, 7 Great Marlborough Street, London, W.) [Gives the biographies of a large number of scientific men throughout the world in a manner never before attempted. Prefacing the main work is a list in tabular form of the universities of the world, which gives the date of foundation and the names of the principals, registrars, and senior professors. Particulars of the life-work of the various scientists are given in abbreviated form, readily followed. The titles of papers and books of foreigners have been translated into English. It is a useful reference-book, the design of which has been very well carried out.]



Memoranda for Correspondents.

All communications must be accompanied by the names and addresses of the writers, otherwise they cannot be dealt with. Queries by subscribers on dispensing, legal, and miscellaneous subjects connected with the business are replied to in these columns if they are considered to be of general interest. Letters submitted for publication (if suitable) should be written on one side of the paper only. Their publication in "The Chemist and Druggist" does not imply Editorial agreement with the opinions expressed.

Drugs in India.

SIR,—In some recent correspondence on "Drugs in India," started by Messrs. Smith, Stanistreet & Co., you were good enough to give space for our views on the subject. We are interested to read your letter this last week on ergot extract, by Mr. Norman Hirst, which bears out what has previously been stated with regard to the pressing desirability for a rigid Food and Drugs Act in India.

Yours faithfully,

EVANS SONS LESCHER & WEBB, LTD.,

HAROLD E. WEBB, Director.

60 Bartholomew Close, London, E.C.

Shops' Act.

SIR,—I notice in your reply last week to "City Chemist" (42/51) that under the new Shops Act he will have to give his assistant one half-day from 1.30 instead of two evenings from 5 P.M. This may be true "according to the Act," but supposing that both assistant and employer, being quite satisfied with this arrangement, elect to continue it, who is to stop them? It will not be anybody's business to interfere in such a case that I can see. Again, the circumstances of this particular business (very keen competition and due observance of the Pharmacy Acts) make it very inconvenient for me to have a proper dinner-hour. I see that, and as my employer makes it well worth my while to forgo it I do so. Who is to stop me and force on me a concession I do not want?

Yours very truly,

BRANCH MANAGER. (50/50.)

[It is no part of our business to show how the Act can be evaded, but this correspondent's argument substantially agrees with the statements made by Mr. W. Glyn-Jones in the House of Commons—viz., that the police or others who may prosecute can only get evidence by assistants becoming informers.—EDITOR C. & D.]

Re Rexall.

SIR,—I have been much interested by the various reports which have appeared from time to time regarding the business of the United Drug Co. in the United States and Canada, and what the company intend to do in this country, as reported in THE CHEMIST AND DRUGGIST, January 13—namely, that "the company contemplates taking a large central shop, to fit up as a model of a 'merchandising' pharmacy, in which, besides their medicinal and toilet specialities, a feature will be made of the sale of high-class sweets and perfumery." There is one aspect of the company's business of which, so far, little or nothing has been said, and which is illustrated in an advertisement in the "Toronto Daily Star," September 15, 1911, from which I quote:

"We invite you to the opening of another modern drug-store. Come to the opening of another new store. 500 dollars will be floating in the air on Saturday, September 16. We will open the doors of our new store by liberating 1,000 balloons. Each balloon will carry a tag worth from 25 cents to 10 dollars. Capture a balloon and bring the tag to Liggett's, Ltd., 244 Yonge Street, 'The Rexall Store.'"

This, it will be seen, is a new store, and not one taken over. Further, it is run as Liggett's Store, this being the name of the President of the United Drug Co. The advertisements go on to give a list of their prices, among others being:

Blaud's pills, regular price, 25c. per 100; our price, 9c.
Epsom salts, regular price 10c. per lb.; our price, 4c.

Powdered borax, regular price, 15c. per lb.; our price, 5c.
Boric acid, regular price, 25c. per lb.; our price, 10c.
Soda bicarbonate, regular price 10c. per lb.; our price, 4c.

Note the price of Blaud's pills, 4½d. per 100. Also Epsom salt at 2d. per lb., powdered borax 2½d., boric acid 5d., and bicarbonate of soda 2d. per lb. On account of big rents, dear labour, etc., prices in Canada are generally at least double those obtaining in this country. I have also before me a copy of "The Citizen" (Ottawa), September 13, 1911, in which Allen & Cochrane, Rexall agents there, advertise thus:

"\$100 being given away at our Exhibition stand to advertise Rexall cold cream. 1,000 jars on sale at regular price of 50c. Every jar contains money—\$10 gold piece in one, \$5 in another, \$1, 50c., 10c., 5c. in others. You can't lose, no matter what you get. The cream is one of the best; you pay only the regular price of 50c. for it, and you are bound to get some money in your jar, so that in any event it costs you less than the regular price, and you may get the \$10 gold piece. Our reputation ensures a fair deal to all alike."

They also offer to give with a 25c. Rexall article another article worth 25c.—that is, 50c. for 25c.

What I should like to know, and what I feel many other chemists in England would like to know, is to what extent these methods are to figure in this country.

Yours truly,

Nottingham, January 20.

A. EBERLIN.

Subscribers' Symposium.

For questions, answers, incidents, and interchange of opinions among "C. & D." readers.

Mercurial Ointment.

Our latest apprentice has discovered the easiest method of making ung. hydrarg. He melted the suet, and after pouring it into the mortar added a little of the mercury. The suet took it up at once, and he experienced no difficulty in completing. We thought we had fixed him up with a job for the afternoon, but it was all done in half an hour.—A. H. (48/44).

Jury Service.

Re "Xrayser II." and coroners' juries. "Stone's Justices' Manual" says: "Exempted persons are not to be inserted in the lists. The exemption extends to serving on coroners' juries." R. v. Dutton (1902), 1 Q.B., 406, etc. Therefore all pharmaceutical chemists are exempt from "all juries and inquests whatsoever" (Jury Acts). Coroners in many cases do not know this and try what "bluff" will do. I have had the pleasure of teaching two of them the law on the matter.—J. P. (48/42).

Boston Cream.

Writing in regard to an inquiry for "Boston cream," a subscriber says: "This was very fashionable when I was a schoolboy, and many a gallon was consumed at that time. I enclose a formula from an old recipe-book: Brown sugar, 1 lb.; essence of lemon, 1 dr.; tartaric acid, 2 oz.; the white of one egg. Boil the sugar with three quarts of water, add the acid, and, when cool, the lemon; finally beat up the white of egg in the mixture. One tablespoonful of this syrup mixed with a tumbler of water makes a nice cooling drink."

The Indian Pound.

An Indian correspondent, in referring to "Xrayser's" note (C. & D., 1911, II., 783) on the weight of tinctures, says chemists in India make no such mistakes. All European chemists throughout India reckon 16 fluid ounces to the pound, and this has been accepted by compounders and buyers all over India as quite correct. Even where bazaar dealers sell tinctures in original 1-lb. bottles by weight from Europe (which is done on a large scale), their customers do not understand why they get more than would be the case if they bought from a local manufacturing firm. This statement may seem beyond belief, but it is true. The manager of a big firm of wholesale chemists and druggists did not know that an imported pound of tincture measures more than 16 fluid ounces. He is country-born. Certainly, as there are 16 annas to a rupee, the Indian rule is sensible and offers many advantages over the by-weight system.

Japanese Advertising.

The subjoined advertisements, appearing daily in the foreign papers here, may interest some of your readers. The "pidgin" is characteristic of the way Japanese talk, and

it shows their eagerness to place their proprietaries on the foreign market.—*T. & S. (Yokohama).*

[The advertisement relates to pills, the following being the commendatory part:

"As an Invigorator and for curing Headache, Giddiness, and for refreshing the Drooping Mind, Very Fragrant; keep the mouth from all Offensive Smell as well as from Fever; clear the throat of Phlegm; keep it moist and clear the Voice. Have Mysterious Powers of remedying Seasickness and every sort of Illness. Good for Stomach-ache, Diarrhoea, etc., arising from the use of bad or strange drinking-water and for any other sort of illness you may often suffer from while on a journey. Purchasers are cautioned against Fraudulent imitations, looking always for our Trade Mark."

Amusing English, no doubt; but what does a Britisher's Japanese look like?]

Appreciations.

Enclosed you will find a P.O. for 10s. I have long had a high opinion of your journal, being fortunate those six years in having a master who subscribed regularly, and now that I am "on my own" I am sure I should feel lost without it. Hence my first subscription. Nor, I think, will it be my last, so long as your trenchant, "nae nonsense" pen is wielded so ably. Well do I remember my first acquaintance with your interesting weekly. It was ten years ago, when I started with the usual country doctor in a very small way, long before I knew there was such a body as the Pharmaceutical Society or such books as the B.P. or "Squire" (the doctor's "Whitla" sufficed for all things pharmaceutical). To make up for the deficiency, the doctor took out the *C. & D.* for one year. That year's numbers, in addition to the *Diary*, were a never-failing source of interest to me during four years, for I never could think to throw them out. And I was glad to renew the acquaintance in Glasgow here. Permit me, in conclusion, to congratulate you on the way you strike the happy medium. No blatant, consequential "Notes" on the keeping properties of blue ointment or tincture of catechu, etc.; no devoting of a few columns in each alternate issue (like our Yankee friends) on the cleaning of greasy mortars, etc. Just q.s. of good stuff sprinkled among a volume of live news. In short, the busy chemist's paper.—*R. G. H. (107/16).*

Legal Queries.

Consult "The Chemists' and Druggists' Diary," 1912, pp. 435 to 454, where most legal difficulties are anticipated, before writing about your difficulty

G. W. Preston (41/40).—Any person, whatever his occupation may be, may sell vermin-killers which do not contain scheduled poison.

W. C. F. (39/10).—An unregistered person carrying on a retail business in a drug-store infringes the Pharmacy Act, 1868, by describing himself as an "analytical and manufacturing chemist."

Resin (49/1).—"Off" and "On" licences are totally different things, and the methylated-spirit licence does not prevent the licensee from getting a licence for the sale of wines for consumption off the premises.

Manager (51/49).—Under the Shops Act it is an interval of not less than half an hour that has to be given for tea. Your suggestion of half an hour altogether, made up of several intervals will not meet the requirements of the Act.

J. R. (42/7).—Household ammonia, 14 oz. strong solution in 4 pints, is just over the 5 per cent. of weight limit, which will bring it under the new regulations on February 1; but if you dilute 14 oz. with 4 pints (*i.e.*, 80 oz.) of water, it will just be under the 5 per cent., and outside the regulations.

G. F. S. (49/22).—(1) Your query in regard to the use of the arms of the Pharmaceutical Society is dealt with editorially. (2) When the Shops Act comes into force a chemist may, on early-closing days, sell patent medicines, such as Beecham's pills and hair-lotions, but not photographic plates. (3) Liq. hydrogen peroxid. B.P. is an entire drug within the meaning of the Medicine-stamp Acts, and may be sold as a chilblain-lotion without stamping.

Nemo (51/33) wants to know if the sending for two penny stamps of a sample of dutiable medicine which actually costs 1½d. would commit him in any way to the stamp-duty. [The conditions upon which dutiable medicines can be given away unstamped are stated in the *C. & D. Diary*, p. 443, under "Giving Away." The Revenue authorities are not accus-

tomed to interfere when the cost of postage only is asked for. In the above case we gather that part of the cost of the medicine is charged for, and, if so, it is vended and must be stamped.]

Meta (51/29) puts the following query under the Shops Act, which comes into force on May 1: "I am a part-time assistant to a pharmacist, and dispense for two medical men. I commence at 8 A.M. and remain until 12 in the employment of the pharmacist. At 1.30 P.M. I commence with a medical man, A., and remain until 3 P.M. Then I commence with medical man B., and remain until 5.30 P.M. At 6.30 I return to A. and remain until 9 P.M., then finish after a long, hard day's work. What I want to know is, am I entitled under the Act to a half-day off per week?" [No. "Meta" is outside the provisions of the Act as to the half-holiday, not being engaged in a shop during the hours when the half-holiday is given.]

G. E. (104/21) writes: "A friend of mine has spent a *bond-fide* indentured apprenticeship. He left the drug-trade some time ago and went to sea. When sitting for his second-mate's ticket it was found out that he was colour-blind, so a seafaring career was no good for him. He now wishes to get back to the drug-trade, but he has lost his indentures. His old master has given him a good character, and stating that he had spent his time to his satisfaction. Will that paper satisfy the Inland Revenue?" [If the apprentice-master was a registered chemist and certifies that the friend served a *bond-fide* apprenticeship, the Revenue authorities will probably accept this as evidence. Try them through the local supervisor.]

Hon. Sec. (45/3) sends us a series of queries regarding the Shops Act, 1911, which we append with replies:

1. *Re* a chemist remaining open as per exemption clause (second schedule), may he sell any regular chemists' lines—viz., sponges, perfumes, photographic, etc.—or only "medicines and medical and surgical appliances"? [The exemption is solely in respect to the sale of medicines and medical and surgical appliances. This exemption is the same as that in the Shop-hours Act, 1894, which the Courts have construed to mean that the shop must not be kept open for the sale of other articles. In 1908 a chemist was fined for selling a hair-brush during closing hours, and in 1909 a bench of magistrates held that the sale of a tablet of toilet soap by a chemist was an offence. When the late Mr. A. C. Wootton gave evidence before a Select Committee on a Shops Bill he was asked by the present Marquis of Salisbury if he considered eau de Cologne to be a medicine. "Certainly," Mr. Wootton replied; "it is a very commonly used remedy for headache." "Then what is a tooth-brush?" asked the Marquis, and Mr. Wootton replied: "A surgical appliance, by all means, frequently prescribed by dentists." These are probably extreme cases, but Section 8 exonerates any person, chemist, grocer, etc., from the penalty for sales during closing hours when there is reasonable ground for believing that the article supplied is required in the case of illness. This, in our opinion, should be the rule for the guidance of chemists in cases when they are asked for articles which they keep in stock, and that they cannot conscientiously or reasonably consider to be medicines and medical and surgical appliances.]

2. *Re* a chemist closed by "agreement of two-thirds of the trade." Can he, "if the bell rings," supply anything beyond medicines and medical and surgical appliances, such as the ordinary stock (as above)? [The principle involved in the reply to the first question is the same as in this one.]

3. *Re* a single-handed manager. Must he close the shop while taking his legal meal-times?—[The Act does not require that the shop shall be closed during meal-times. On the contrary, by differentiating between a meal taken in the shop and one taken elsewhere than in the shop it may be assumed that the assistant is not required to leave the premises during meal-times. The obvious requirement of the Act is that the owner of the shop shall allow stated intervals to each employé to take his meals, and the manager is entitled to take the intervals without interruption from business. Surely this can be done otherwise than by the manager closing the shop for the time being.]

4. *Re* the expression "Shop-assistants" (Section 14). How does it affect a dispenser, say, in a room away from the retail part of the shop, who does not see customers or despatch the goods, or to a clerk (in chemist's employ) who keeps the books and makes out and receipts accounts? [The expression used in the Shop-hours Act, 1892, as to employment in shops is "in or about a shop." In the new Act the employment is "wholly or mainly in a shop in connection with the serving of customers, or the receipt of orders, or the despatch of goods." Messrs. A. Page and W. Finlay, barristers-at-law, in their comments on the Bill, say: "Commissioners outside the shop entrance, messenger-boys, domestic servants, milliners' or tailors' assistants whose main business it is to fit on dresses at customer's houses, etc.,

are not, it is submitted, within the definition of the Bill." If this be so, a dispenser who has nothing whatever to do with the serving of customers, and a clerk occupied in the manner stated, would be outside the expression "Shop-assistants."]

5. *Re* "occupiers of such shop" (Section 2, paragraph 4). Does a man with two (or more) shops have two (or more) votes—i.e., does each shop count one vote upon the "exemption" vote? [It is the occupier who has the vote, not the shop, and there is no provision in the Act to enable the occupier to multiply his voting power, except that he has a vote in each area in which he carries on business.]

Miscellaneous Inquiries.

We do not as a rule repeat information which has been given in this section during the past twelve months, as it occupies space which can be more profitably utilised for other information. In such cases the numbers are mentioned, and if querists cannot refer to these they may obtain the numbers from the "C. & D." Office at the published prices, usually 6d.

We do not undertake to analyse and report upon proprietary articles, and when samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how.

Apprentice (34/7).—You have really little to grumble about. Some of the most successful pharmacists during their apprenticeship days had to do a lot of errand-running, bottle-cleaning, shop-sweeping, and the like. You will never get along if you do not put your heart into your work; however humble it may be, it should teach you something if you are willing to learn.

Succinum (Natal) (30/70).—"THE METHODS OF ANALYSIS" of the Association of Official Agricultural Chemists of the United States is published as a bulletin by the Department of Agriculture, Washington.

Hairon (Melbourne) (233/1).—HAIR-PREPARATIONS.—The latest edition of "Pharmaceutical Formulas" embodies the latest practice in compounding hair-lotions. We should think that one of the pilocarpine lotions would suit your requirements.

Antik (23/4).—See reply to "Hairon."

S. H. M. (256/63).—We do not know what is used for hardening the sample of jute. It looks like a mineral pitch, but there are various distillation residues which might answer the tests you mention.

Acacia (101/20).—(1) TRAGACANTH MASSAGE CREAM.—Indications as to a suitable basis for this were given in the *C. & D.*, January 13, index folio 70. (2) An assistant with optical experience is certainly worth more than an assistant who does not possess that knowledge, provided always that there is a possibility of utilising it.

O. & O. (31/71).—COUGH-POWDERS FOR HORSES.—The following is a formula for powders which are especially useful in chronic cough in horses:

Pulv. fol. aconiti ...	...	3vj.
Ac. arseniosi ...	...	3vj.
Antim. potass. tart. ...	...	3ss.
Pulv. anisi ...	...	3ij.

Misce et divide in pulveres vj. Signe: Give one each night in the food.

Skeggì (Rome) (239/67).—We do not know the formulæ of the proprietary articles to which you refer. It is contrary to our practice to supply formulæ for imitations of proprietary articles.

W. B. M. (39/50).—DANDRUFF OINTMENT.—Non-mercurial pomades for the treatment of dandruff and suited for packing in collapsible tubes are the following:

1. <i>Vidal's Pomade.</i>		2.	
Sulphur. præcip. ...	3iij.	Salicylic ...	3ss.
Ol. theobrom. ...	5v.	Sodi biber. ...	gr. xv.
Ol. ricini ...	3viij.	Bals. Peru ...	3ss.
		Ol. cinnam. ...	mij.
		Ol. bergam. ...	mx.
		Vaseline ...	3j.

Melt the cocoa-butter and castor oil together, and when cold mix in the sulphur.

Mix without employing heat.

W. S. (39/63).—PHOSPHATES IN FLOUR.—These are detected by examining the ash. Flour is incinerated in a platinum crucible, the mass being moistened with strong hydrochloric acid before the whole of the carbon is burnt off. Evaporate to dryness first in a water-bath, and then by gentle ignition over a Bunsen flame. Now add warm dilute nitric acid

to the ash, and filter from silica and any unburnt carbon, washing the filtrate with the warm acid. This solution contains the phosphoric acid together with the iron, lime, and other bases, the molybdc test being used to demonstrate the presence of phosphoric acid. The test can be quantitatively employed, the details being laid down in Jago's "Technology of Bread-making."

J. O. E. (40/35).—CAMPHENE is pinene monohydrochloride, otherwise known as artificial camphor. Camphine for burning is a highly rectified oil of turpentine, and many years ago when camphine lamps were in vogue the camphine was made by adding to 16 oz. of rectified oil of turpentine 1 oz. of ether and ½ oz. of camphor, and gently warming until a clear solution is obtained.

Phenacetin (40/11).—CUPMOSS SYRUP is a decoction of cup-moss (1-10) containing potass. carb. gr. x., coccus cacti gr. x. to 3viij., and sweetened with honey. As a substitute, syr. tolu is sold for it in the Midlands, or syr. simp. tinted a deep sherry colour with syr. papav. "Rock salmon" as a remedy we cannot trace, and an inquiry in the *C. & D.* some time back brought no response.

C. H. (40/39).—SUGAR SOAP is resin soap. It is so called because it is in the form of a pale yellow powder like moist sugar. It is used for household-cleansing purposes as being somewhat stronger than ordinary soap.

F. T. (39/52).—CHEMISTS' OPPORTUNITIES IN AUSTRALIA.—We have given information on this subject several times recently, the following being the chief references: *The Chemists' and Druggists' Diary*, 1909, p. 211; *C. & D.*, April 24, 1909, p. 628; also May 28, 1910, p. 835, and August 13, 1910, p. 293.

R. B. (Barcelona) (40/18).—(1) VARNISH FILTER.—We will try and find out the makers of the filter to which you refer. (2) SHELLAC VARNISH.—Stick-lac is too impure for use in the manufacture of varnishes. The preparation from it of seed-lac and shellac are in the nature of purification processes. The varnish is made by dissolving shellac in spirit in the proportion of 1½ lb. in 1 gal. From this *Mahogany Varnish* is made by adding to each gallon ½ oz. of Bismarck brown and sufficient nigrosin to darken the colour. *Walnut Varnish* requires 1 oz. Bismarck brown and ½ oz. of nigrosin to the same quantity, and for *Ebony Varnish* 2 oz. of spirit-black is added to the plain shellac varnish. (3) Spratt's crissel is an animal food product made by Spratts Patent, Ltd. (4) GLASS SILVERING.—The original method devised by Dayton and modified by Liebig, in which caustic soda was employed, has been displaced by more modern processes, such as that of Edel, given in the *C. & D.*, October 28, 1910, index folio 664.

Retrospect of Fifty Years Ago.

Reprinted from "The Chemist and Druggist," January 15, 1862.

Production of Vibrations and Sounds by Galvanic Currents.

At the last meeting of the Royal Society, held on Thursday, January 9, a paper was read from Mr. Gore, describing the production of visible vibrations and sounds of varying intensity by the passage of voltaic currents through a solution of cyanide of mercury and potash in dilute hydrocyanic acid, under which circumstances the mercurial connections, if of the requisite forms, are thrown into visible vibrations of varying rapidity, and emit sounds, the pitch of which varies with the vibrations. It was found that when a small number of cells of a large size were employed, the vibrations were small and the sounds emitted high; but that when the cells were numerous and small, the vibrations of the mercury were large and the sounds bass. Again, the number and pitch of the vibrations produced by the same current can be varied by transmitting it through a primary or secondary coil of wire. The inference drawn by Mr. Gore from these extremely interesting and valuable experiments is that they prove electricity, like heat and light, to consist essentially of vibrations, which, under ordinary circumstances, are so minute as to be unappreciable, but that under certain conditions, as in the experiments that have been alluded to, may be so modified as to become visible. The paper was regarded as a very valuable contribution to science by the Fellows of the Society, although the idea was expressed that further facts would be required before the conclusion arrived at by the author could be regarded as proven.—T.

["T." was Mr. William B. Tegetmeier, the naturalist and journalist, who is the last survivor of the original contributors to *THE CHEMIST AND DRUGGIST*, now in his ninety-sixth year, and living in West Hampstead.]